PowerPoint Presentations

Mission Objectives


CGIAR
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TO
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ICRISAT
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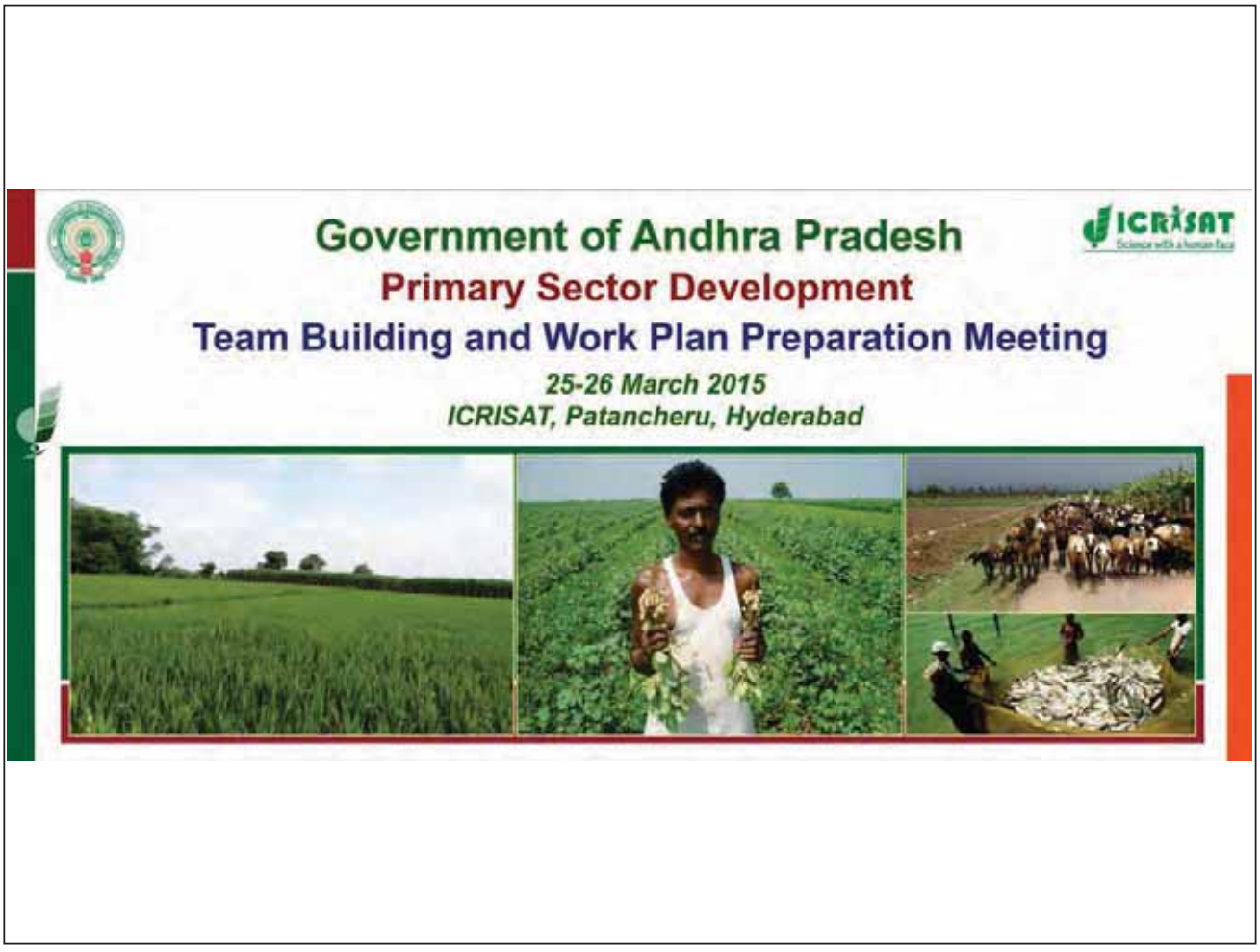
International Crops Research Institute
for the Semi-Arid Tropics


Government of Andhra Pradesh
ICRISAT
Primary Sector Development
Team Building and Work Plan Preparation Meeting
25-26 March 2015
ICRISAT, Patancheru, Hyderabad

Objectives

- Building the team for development of Primary Sector Mission in the state of Andhra Pradesh and internalize the strategy, monitoring mechanisms and outputs in different sectors
- To refine the work plans of different sectors at state and district levels to achieve the targeted outputs in the Primary Sector Mission
- To link financial and physical targets for the Primary Sector Mission and prepare monitoring indicators and timelines for the proposed interventions.
- Finalize the plans for pilot site interventions in 13 districts and workout the mechanisms for convergence with different line department activities for the pilot sites

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Thank you

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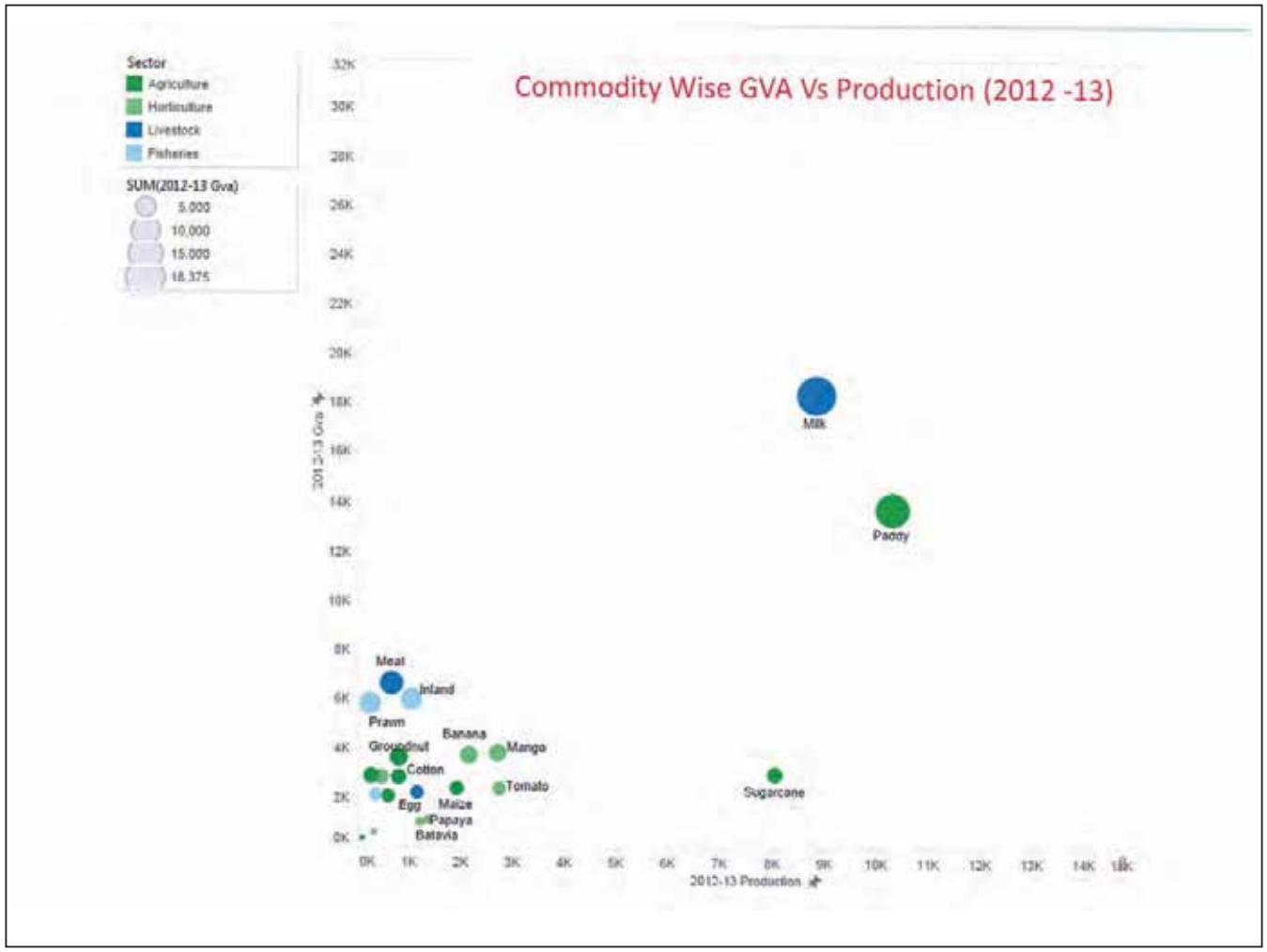
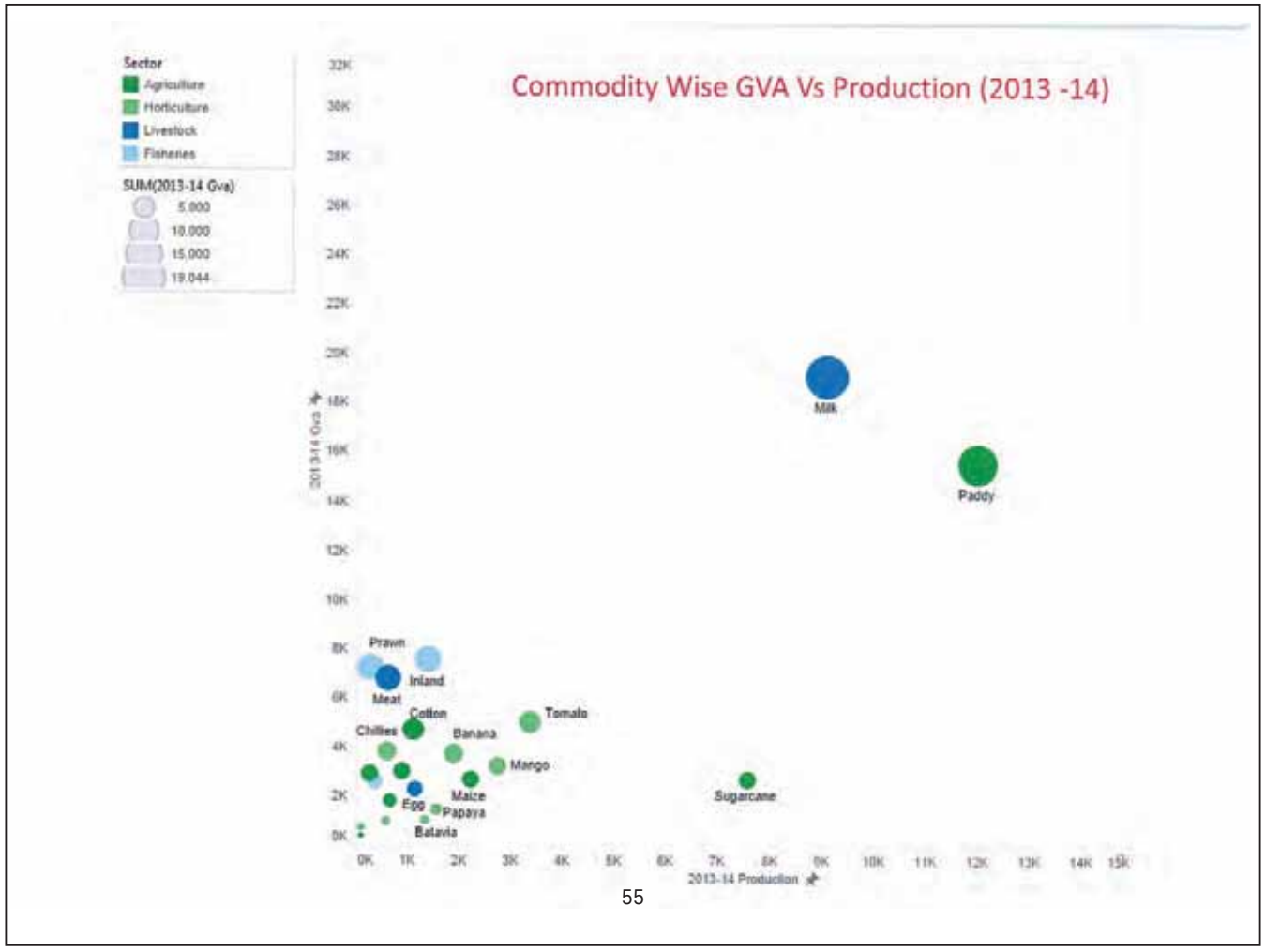
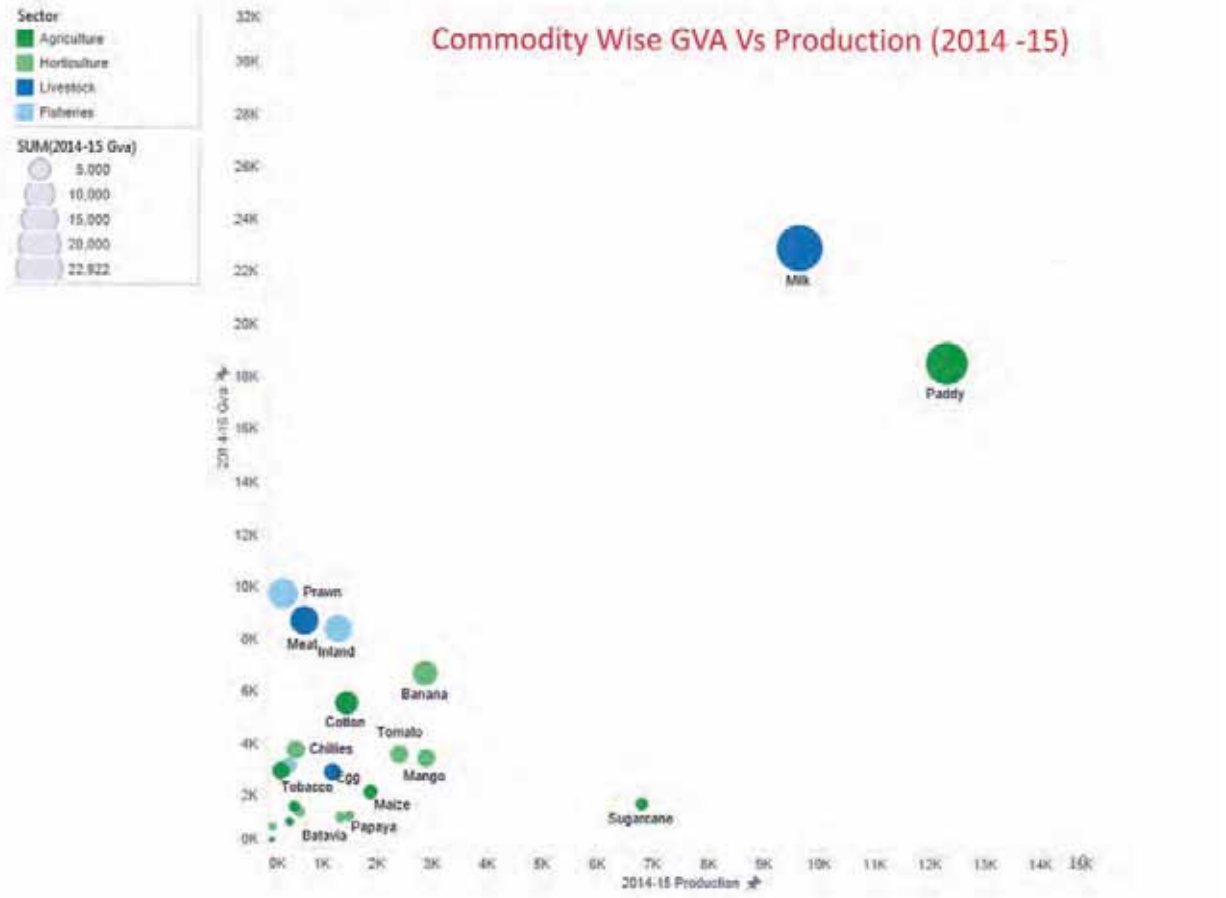
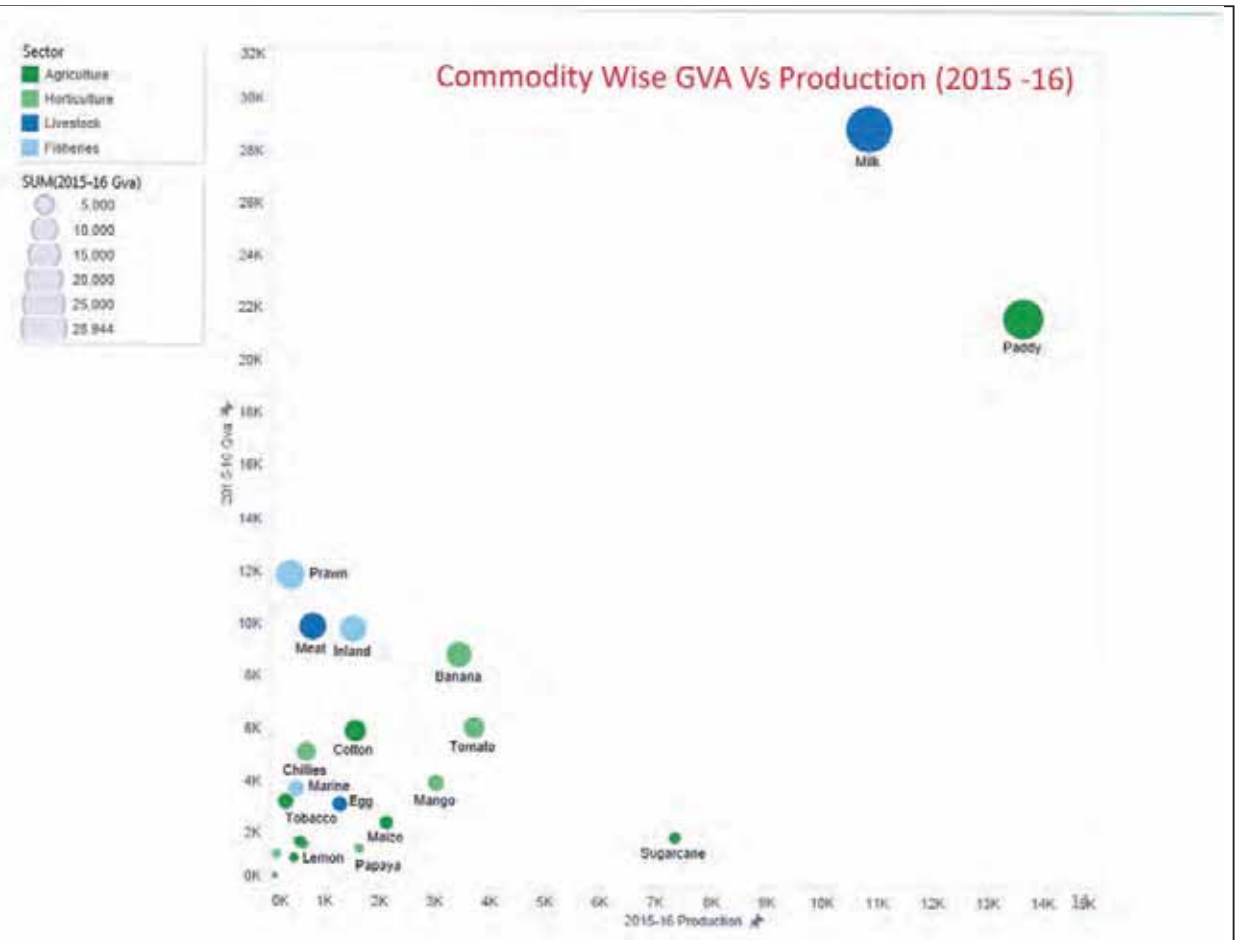

Commodity Wise GVA Vs Production (2012 -13)
Sector
Agriculture
Horticulture
Livestock
Fisheries
SUM(2012-13 Gva)
5,000
10,000
15,000
18,375
2012-13 Gva
2012-13 Production
Milk
Paddy
Meat
Inland
Prawn
Banana
Mango
Groundnut
Cotton
Tomato
Egg
Maize
Papaya
Batavia
Sugarcane


Commodity Wise GVA Vs Production (2013 -14)
Sector
Agriculture
Horticulture
Livestock
Fisheries
SUM(2013-14 Gva)
5,000
10,000
15,000
19,044
2013-14 Gva
2013-14 Production
Milk
Paddy
Prawn
Inland
Meat
Cotton
Tomato
Chillies
Banana
Mango
Egg
Maize
Papaya
Batavia
Sugarcane


Commodity Wise GVA Vs Production (2014 -15)
Sector
Agriculture
Horticulture
Livestock
Fisheries
SUM(2014-15 Gva)
5,000
10,000
15,000
20,000
22,922
Milk
Paddy
Prawn
Meat
Inland
Banana
Cotton
Tomato
Chillies
Mango
Egg
Tobacco
Maize
Papaya
Batavia
Sugarcane
2014-15 Production


Commodity Wise GVA Vs Production (2015 -16)
Sector
Agriculture
Horticulture
Livestock
Fisheries
SUM(2015-16 Gva)
5,000
10,000
15,000
20,000
25,000
28,944
Milk
Paddy
Prawn
Meat
Inland
Banana
Cotton
Tomato
Chillies
Marine
Egg
Mango
Tobacco
Maize
Lemon
Papaya
Sugarcane
2015-16 Production

Department Action Plans

Primary Sector Mission

ANIMAL HUSBANDRY DEPARTMENT

GOVERNMENT OF ANDHRA PRADESH

Basic Data




- **42 Lakh Rural Farm Families own Livestock / Poultry, which is 47% of the total Rural House Holds.**
- **13 Lakh House Holds own Cattle; 18 Lakh House Holds own Buffaloes; 4 Lakh Shepherd families dependent on Sheep & Goats.**
- **Livestock are mostly in the hands of SF / MF / Agrl Labors / Landless Farm Labors**

LIVESTOCK RESOURCES – STATUS IN THE COUNTRY

S.No	Species	Unit of Measurement	Number as per LSC 2012 (Lakhs)	Status in the Country
1	Crossbred Cattle	Lakh Nos	19.39	7th
2	Indigenous Cattle	Lakh Nos	26.68	15th
3	Graded Murrah Buffaloe	Lakh Nos	30.00	5th
4	Non Descript Buffaloes	Lakh Nos	34.34	5th
5	Sheep	Lakh Nos	135.37	2nd
6	Goats	Lakh Nos	44.17	11th
7	Pigs	Lakh Nos	1.46	19th
8	Total Livestock	Lakh Nos	291.53	6th
9	Poultry	Lakh Nos	815.60	3rd

Livestock Sector – Strategies on Growth Engines

Sl No	Growth Engine	2013-14		2014-15		2015-16		Projected % Increase over 2014-15	
		Production	GVA (Rs Cr)	Production	GVA (Rs Cr)	Production	GVA (Rs Cr)	Production	GVA (Rs Cr)
1	Milk (Lakh MTs)	90.83	19044	96.50	22922	108.00	28944	12	24
2	Meat (Lakh MTs)	4.89	6802	5.28	8721	6.00	9917	14	14
3	Eggs (Crore Nos)	1272.69	2319	1336.32	2909	1425.00	3134	7	8

Livestock Sector – Action Plan for the Strategies

Sl No	Activity	Action Plan for Proposed Strategy	Estimated Additional Milk Production	Estimated Milk Production
1	Improving the Average Milk Yield of High Yielding Milch Cattle (6 Litres per Day and above) by 2 Litres per Day	10 Lakh Animals x 2 Lit per Day	20 LLPD from 2015-16 onwards	**2015-16** **263 (Base Year)** + 20 (Activity 1) + 10 (Activity 2) + 8 (Activity 3) = 301 LLPD **2016-17** 300 (2015-16) + 20 (Activity 1) + 15 (Activity 2) + 12 (Activity 3) + 24 (Activity 4) = 372 LLPD **2017-18** 372 (2016-17) + 25 (Activity 1) + 30 (Activity 2) + 18 (Activity 3) + 18 (Activity 4) = 465 LLPD **2018-19** 465 (2016-17) + 25 (Activity 1) + 30 (Activity 2) + 20 (Activity 3) + 20 (Activity 4) = **560 LLPD**
2	Identification of 5000 Progressive Dairy Farmers (producing >200 Lts/Day) and providing Bank linkages to increase the number of animals and production	5000 farmers x 200 Lit Per Day	10 LLPD from 2015-16 onwards	
3	Identification of 21000 SHGs involved in Dairying and improving productivity of their animals (Through NGO/SERP, 2 LLPD can be increased through 5000 SHGs)	40 Lit per Day per SHG x 21000 SHGs in 7 potential Districts	8.5 LLPD from 2015-16 onwards	
4	Identification of high genetic female Heifers between 18 to 20 months	3 Lakh Heifers x 8 Lit per Day	24 LLPD from 2016-17 onwards	
5	Identification of improved progeny calves born through Artificial Insemination program through Save Calf Program	5 Lakh Female Calves x 8 Lit per Day	40 LLPD from 2017-18 onwards	
6	Ram Lamb Exchange, Grazing lands to Shepherds, Modern Slaughter houses, Meat Outlets/Meat Processing and Export Oriented Units for Meat and Eggs	135 Lakh Sheep and 46 Lakh Goat, Commercial Poultry birds	0.75 Lakh MTs	Meat Production from 5.28 Lakh MTs to 6.00 Lakh MTs and Egg Production from 1336 to 1425 Crore Numbers

Livestock Sector – Implementation of Strategies

- **Survey Format for data collection on high yielding animals, heifers, calves, big dairy farmers and SHG Groups**
- **Clusters / District wise approach for preparing ACTION PLAN (DPR)**
- **Market Surveillance / Intelligence**
- **Credit support to Dairy Farmers with linkages**
- **Processing and Value Addition in PPP mode**
- **Skill Development of farmers and staff**
- **MIS/GIS**

Government of Andhra Pradesh
Department of Fisheries

ACTION PLAN FOR 2015-16

Fisheries- A Growth Engine For Development of Andhra Pradesh

Important Activities of the Fisheries Department

INLAND FISHERIES:

Fish seed production and distribution , Lease of tanks to FCSs, Issue licenses in reservoirs, Stocking of Fish Seed in Reservoirs, Construction of fish markets, Provide Mopeds, transport vehicles, ice boxes etc.,

MARINE FISHERIES:

Implementation of MFR Act 1995/ MS Act 1958 – Conserve fish stock by observing ban period etc,
Motorization of traditional crafts, Construction of harbours and landing centres, subsidy on HSD oil,
Coastal Security- Registration of Fishing Vessels, Issue of Biometric ID cards,
Supply of sea Safety and Navigational equipment and fishing boats and nets

AQUACULTURE:

Regulating Brackish water aquaculture, under Coastal Aquaculture Authority Act,2005

Regularization of Fresh Water Aquaculture -GO Ms No. 7, dt. 16-3-2013 of AHDD&F Dept.,

Providing laboratory services for diagnosing diseases and providing remedies.

WELFARE OF FISHERMEN / FISHERWOMEN:

Group Accident insurance, Savings cum Relief, Housing , Relief due to natural calamities
Organizing Fishermen/women Co-op. Societies and implementation of A.P.C.S.Act 1964,
Revolving fund to Matsya Mithra Groups, Supply of rice during ban period on marine fishing.

Basic Data

Marine Fisheries – Capture base

Coastline : 974 Kms
Continental shelf : 33,227 Sq. Kms
Fishermen villages : 555

Fishermen population

Fishermen population : 6.05 lakh
Seagoing fishermen : 1.608 lakh

Infrastructure

Fishing harbours : 4
Fish Landing Centres : 349
FLCs developed : 18
Fishing crafts : 28,100

Inland Fishery resources:

Reservoirs (78) : 1.53 lakh ha
Tanks (39691) : 4.58 lakh ha
Kolleru lake : 0.90 lakh ha
Rivers & Canals : 12,218 kms

Freshwater Aquaculture

Area under culture : 1.00 lakh ha.

Coastal Aquaculture (Brackish water)

Potential : 1.50 lakh ha.
Area Developed : 0.75 lakh ha
Area under culture : 0.24 lakh ha.

Fisheries Infrastructure

Boat Yards	32
Ice factories	148
Cold Storages	29
Freezing Plants	41
Curing yards	31
Peeling sheds	38
Processing Plants	26
Fish meal Pants	4
Feed Mills	28
Shore Stations	12
Harbours	4
Fish Seed Farms (Govt. and Private	132
Shrimp hatcheries	300

Important Achievements during last five years

- Fish production enhanced from 11.58 Lakh MT (2009-10) valued at Rs. 9783.83 crores to 17.68 Lakh MT (2013-14) valued at Rs. 20398.85 crores –growth rate of 10.54% p.a on production and 21.70% p.a on value. Andhra Pradesh stood first in the total fish and prawn production in the country.

- Increase in marine Exports from Rs.2100 Crores (2009-10) to Rs.12, 100 Crores (2013-14) from AP. (41% share in India)

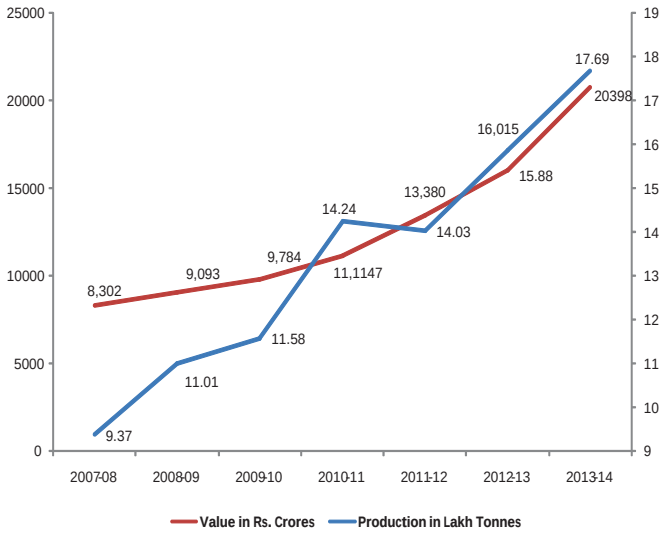
- Registration of 28,168 marine fishing boats and issuance of 1,97,766 biometric cards to coastal fishers.

- Introduction and expansion of alternate species in fresh and Brackish water (L. vannamei, Pangasius)

- Increase in productivity of freshwater fish from 3 to 8 MT per ha in culture ponds and 35 kgs to 80 kgs per ha in reservoirs.

Fish Production for last 8 years (2007-08 to 2014-15 (Upto Dec. 2014)

S. No.	Year	Production (LT)	Value (Rs. Cr.)
1	2007-08	9.37	8,302
2	2008-09	11.01	9,093
3	2009-10	11.58	9,784
4	2010-11	14.24	11,147
5	2011-12	14.03	13,380
6	2012-13	15.88	16,015
7	2013-14	17.69	20,398
8	2014-15 Anticipated up to March 2015	19.20	24950



AP STANDS FIRST IN FISH AND PRAWN PRODUCTION IN INDIA WITH 17.69 LAKHS TONNES DURING 2013-14

CONTRIBUTION OF FISHERIES SECTOR TO GSDP

Year	% of Fisheries sector contribution to GSDP at constant prices (2004-05)
2007-08	4.21
2008-09	4.19
2009-10	3.93
2010-11	4.24
2011-12	4.55
2012-13	4.93
2013-14	5.42
2014-15	To be calculated by DES

AP Status in Seafood Exports and its share in India for the last 5 years

Rs in Crores

Year	India	A.P	% of AP's contribution
2009-10	10048	2100	20%
2010-11	12901	2400	18.60%
2011-12	16597	2727	16%
2012-13	18856	3125	16.57%
2013-14	30200	12100	40%
2014-15 (3rd Quarter) (approx.)	26300	13000	50%

Fisheries Data sheet

Year				2013-14			2014-15			TARGET 2015-16			Area
SECTOR	Source of water	No. of source	AREA IN Ha	PRODUCTION	Total production Cost	GVA IN RS CR	PRODUCTION	Total production cost	GVA IN RS CR	PRODUCTION	Production cost	GVA IN RS CR	
FISHERIES						32377			39493			47114	
PRAWN	Brackish water	42571	45860	2.56	8285	7275	2.81	11051	9759	4.42	17498	11877	45860
	Freshwater	15000	30000										30000
	Marine sector (974 kms)												
	Sub total	57571	75860	2.56	8285	7275	2.81	11051	9759	4.42	17498	11877	75860
INLAND FISH	Tanks	25402	338565	11.39	8590	7603	12.4	9896	8409	13.2	10560	9812	338565
	Reservoirs	104	240819										240819
	Aquaculture ponds	25536	106587										106587
	Sub total	51042	685971	11.39	8590	7603	12.37	9896	8409	13.20	10560	9812	685971
MARINE - 974 kms	Coastal waters		974 kms	3.73	3523	2621	4.00	4000	3157	4.00	4000	3736	974 kms
	Grand Total	108613	761831	17.68	20398	17499	19.18	24947	21325	21.62	32058	25425	

Fisheries Strategies

Steps	Technological Interventions	Production	Productivity	Increase in GVA	Increase in Production cost
A total of 1700 ha expasion (1. Expansion of 500 ha for scampi 2. Expansion of 1000 ha for brackish water shrimp culture 3. expansion of Mud crab culture in 100 ha, Expansion of 100 ha for sea bass culture,) Farm mechanisation, Disease surveillance, Creation of infrastructure through PPP Mode Promotion of Best Management Practices	Promotion of BMPs with the assistance of CIBA, RGCA, Introduction of new technology for sea bass and mud crab production.	1.61	L. vannamei shrimp prodcution from 5 tonnes to 6 per hect	2118	6447
1. Promotion of L. vannamei culture in freshwater acuacultur ponds 2. Reservoir stocking with advance finger lings (2000 nos per hect.) 3. Stocking of scampi seed in reservoirs, 4. Liberalisation of aquaculture ponds license procedure, 5. Promotion of new species i.e. Tilapai and exapansion of in 1000 hect. 6. Promotion of farming and hatcheries through private sector	1. Introduction of technologies for hatchery and farming for Tilapia culture 2. Introduction of Cage culture in Resorvoirs.3. Coordination with CIFA, CIFRI, CIFT for technology transfer	0.83	Reservori production from 80 kgs to 150 kgs per hect. Tilapia fish 40 tonnes / ha	1403	664
1. Promotion of deep sea fishing through mechanised and motorised fishing boats 2. Strict enforcement of ban period and providing relief to conserve the resources during breeding season for 47 days. 3. Strict enforcement of mesh size regulation 4. Creation of infrastructure like jetties, harbours, fish landing centres , cold chain facilities through PPP Mode.	1. Promotion of deep sea fiahing with assistance of MPEDA, CMFRI, CIFNET.2.Infrastrcuture Provision in marine sector with support of CICEF and Private consultants	0	Un tapped deep sea resouces will be tapped to compensate the depletion of production in territorial waters	579	0
		2.44		4100	7111

ACTION PLAN for IMPLEMENTATION of Targets set for 2015-16

The activities of action plan are oriented towards the Goal of making the A.P as Aqua Hub in India

I. Freshwater Fisheries Sector:

- ❖Promotion of 3-ST/ 32- SC fishermen societies through integrated development for their empowerment
- ❖Introduction of cage culture in 3 reservoirs on pilot basis (Srisailam, Surampalem and Somasila)
- ❖Revival Scampi culture in 500 hectares
- ❖Promotion of GIFT/ Red Tilapia culture in 1000 hectares
- ❖Establishment of 4 Brood stock centres for quality brood stock multiplication and propagation (2 MC and 2 Tilapia)
- ❖Setting up of Fibre fish marts of 10 units in Municipal Corporations
- ❖Capacity building programmes for fishers on Good Management Practices in Aquaculture and Fisheries sector
- ❖Supply of fish inputs to inland fishers, ornamental fish breeding and culture units, supply of mobile units for marketing , Disease surveillance, lab services etc. under Fisheries Development Scheme.
- ❖ Revolving fund to Fisherwomen through Matsya Mithra Groups (MMGs) for fish marketing
- ❖The Government assistance proposed for F.W. Fisheries is 5870.39 lakhs

ACTION PLAN for IMPLEMENTATION of Targets set for 2015-16 Contd…….

II. Brackish water Fisheries Sector:

- ❖Revival of brackish water aquaculture in 1000 ha of abandoned/ defunct area for shrimp farming by giving input subsidy to farmers
- ❖Assistance to Disease surveillance through Aqua labs and mobile lab services
- ❖Promotion of mangrove mud crab culture in 100 hectares on pilot basis
- ❖Promotion of land based sea bass culture in brackish water ponds in 100 hectares on pilot basis
- ❖Promotion of mechanisation for 1400 ha through supply of aerators, solar lights, solar pumps for shrimp farming for high production and for energy saving
- ❖Promotion of establishment of new hatcheries for new species like Pangassius, Tilapia, Mud Crab, Sea bass and Scampi
- ❖ Publicity for Brand Andhra for AP State fishery prodcuts
- ❖Additional technical man power through outsourcing for extending services at farm site.
- ❖Extension and capacity building on sustainable practices and for promoting Brand Andhra
- ❖The Government assistance proposed for Brackish water Fisheries Sector is Rs. 6886.41 lakhs

ACTION PLAN for IMPLEMENTATION of THE TARGETS set for 2015-16
Contd……

III. Marine Fisheries Sector:

- ❖Promotion of deep sea fishing through 600 mechanised fishing vessels by providing input subsidy
- ❖Promotion of value addition & hygienic handling of fish by establishing 6 units of De-scaler, deboning and packing units on pilot basis
- ❖Relief to marine fishers during ban period on marine fishing for 47 days
- ❖Subsidy on HSD oil for motorised and mechanised fishing vessels
- ❖Maintenance of shore stations and relief boats for effective disaster preparedness
- ❖GPS tacking tracking for marine fishing craft on pilot basis
- ❖Establishment of fish landing centre at Antarvedipallipalem at East Godavari District and at Biyyaputhippa of West Godavari District
- ❖ Consultancy charges for establishment of marine infrastructure and technology transfer
- ❖Implementation of welfare scheme such as ex-gratia to deceased fishermen
- ❖Training, extension and capacity building in marine fisheries sector
- ❖The Government assistance proposed for Marine Fisheries Sector is Rs. 5962 lakhs.

Strategical Interventions Required

I. Promotional Role:

- ❖Introduction of New species like Red Tilapia, GIFT Tilapia, Sea bass, Mud crab, amur etc
- ❖Cage culture under PPP mode (Both in Fresh water and marine water)
- ❖Seed supply and marketing of produced fish products tie up with MPEDA
- ❖Revival of abandoned Aqua farms Bringing additional extent under Fish / Scampi culture
- ❖ Provision of certain incentives with regard to Registration ,logistics, mobilisation of Bank loan, disease surveillance support etc
- ❖Expansion of local market in all Municipalities and major Gram Panchayats

Strategical Interventions Required (contd..)

Promotional Role:

❖All FCSs/ MMGs/SHGs will be guided by way of capacity building to take up processing activities / marketing activities/value addition by supplying fishery tools (like deboners, descalers,etc) , Strengthening their capacities with help of NFDB

❖By utilizing the MGNREGS funds to promote captive nurseries in all the G.P. and M.I. /Departmental tanks

❖**Fully utilizing the existing Government and private seed production nurseries and hatcheries to meet the seed demand of targeted Production.**

❖Provision of Solar street lighting in fish pond areas, solar pump sets, solar aerators with cabling, D.O. meters., Solar lanterns, Marine boats – home light, Solar fencing as bio security measures.

TARGET FISH PRODUCTION & VALUE FOR 2015-16

Sl. No	Sector	Production (lakh tonnes)	Value (Rs in Crores)
I	Production projected from Freshwater fisheries sector (lakh tonnes)		
	1) Fish (including Tilapia)	13.20	10560
	1) Prawn/ Shrimp (Scampi & Vannamei)	1.20	4800
	Sub total	**14.40**	**15360**
II	Production projected from Brackish water sector (lakh tonnes)		
	1) Shrimp (39000 ha)	2.50	10000
	1) Sea bass (100 ha)	0.04	12
	1) Mud Crab (100 ha)	0.015	6
	Sub total	**2.555**	10018
III	Production projected from Marine fisheries sector (lakh tonnes)		
	1) Fish	4.00	4000
	1) Captured shrimp	0.67	2680
	Sub total	**4.67**	**6680**
	Grand Total	**21.625**	**32058**

BUDGET ESTIMATE FOR 2015-16

- A total demand of Rs. 22418.74 Lakh is proposed for the year 2015-16, out of which Rs. 3699.94 Lakh is under Non-Plan ad Rs.18718.80 Lakh is under Plan Schemes.

- Component wise and scheme wise budget proposed for 2015-16 is as follows.

FISHERIES - QUARTER WISE PRODUCTION TARGET, VALUE AND EXPENDITURE PROPOSED DURING 2015-16

	2014-15			2015-16		
Quarter	Production (In LMT)	Value (in crores)	Expenditure (in Crores)	Production (in LMT)	Value (in Crores)	Expenditure (in Crores)
Quarter 1	6.69	8703	0	6.90	10276	40.00
Quarter 2	2.34	3048	6.00	3.72	5345	53.00
Quarter 3	3.58	4660	4.00	4.50	6757	53.00
Quarter 4	6.59	8539	3.00	6.50	9680	41.00
Total	19.20	24950	13.00	21.62	32058	187.00

BE SCHEME WISE FOR 2015-16

Sl No	Name of the Scheme	BE (Rs. in lakhs)	Existing or new scheme
I. SCSP			
1	Supply of inputs fishing inputs(seed, Nets, boats,Fish seed farms) 2405-00-789-11-06-310-312	1013.54	Existing
II. TSP			
1	Scheme for relief and welfare of Tribal's 2405-00-796-11-04-310-312	101.35	Existing
III	PLAN SCHEMES		
1	Reimbursement (Exemption)of Sale tax on HSD Oil 2405-00-103-11-08-310-312	1400.00	Existing
2	Relief to Marine fishermen during ban period. 2405-00-103-11-14-310-312	1300.00	Existing
3	Maintenance of Shore stations 2405-00-800-11-05-130-132	12.00	Existing

BE SCHEME WISE FOR 2015-16

Sl No	Name of the Scheme	BE (Rs. in lakhs)	Existing or new scheme
IV	FISHERIES DEVELOPMENT (**Rs. 11891.91 Lakhs)**		
1	Cage culture in Reservoirs (3 units)	1002.00	New
2	Revival of Scampi culture (500 ha)	275.00	New
3	Promotion of Tilapia culture (1000 ha)	1000.00	New
4	Development of Fish Brood stock centres (4 Nos)	400.00	New
5	Pilot project for supply of Hygienic fish products (Descaler , Deboner, packing machine and working shed) 6 units	90.00	New
6	Setting up of Fibre Fish Marts (10 units)	106.00	New
7	Fishermen Training Schemes	40.00	New

BE SCHEME WISE FOR 2015-16

Sl No	Name of the Scheme	BE (Rs. in lakhs)	Existing or new scheme
8	Revolving fund assistance to fisherwomen (MMGS)	50.00	New
9	Provision of State Govt. share for implementation of NFDB Schemes	50.00	Existing
10	Setting up of Back yard hatcheries for ornamental fish production by fisherwomen (SHG/ Cooperatives/ Individual fisherwomen)	112.50	New
11	Publicity for Brand Andhra	400.00	New
12	Consultancy Charges	300.00	New
13	Assistance to Disease Surveillance through Aqua and Mobile Lab services	200.00	New
14	Revival of Brackish water Culture (1000 ha)	2000.00	New
15	Promotion of Mangrove crab farming (100 ha)	240.00	New
16	Mechanisation of Aquaculture (Supply of aerotors, solar lights and solar pumps- 1400 ha))	3300.11	New
17	Promotion of Seabass (100 ha)	210.00	New

BE SCHEME WISE FOR 2015-16

Sl No	Name of the Scheme	BE (Rs. in lakhs)	Existing or new scheme
18	Assistance for establishment of hatcheries for production of seed of new species like Tilapia, Seabass, scampi , Mud-crab (7 units)	210.00	New
19	Awareness , Extension and capacity Building and strengthening of existing training centres.	200.00	New
20	Out sourcing of Technical persons for implementation and monitoring of flagship programmes and provision for ICT	246.30	New
21	Promotion of Deep sea fishing through mechanised boats (supply of accessories of tuna long lining and gill nets for deep sea fishing) (600 MECHANISED BOATS)	1200.00	New
22	Purchase and maintenance of Relief boats	20.00	New
23	Exgratia to Deceased fishermen	225.00	New
24	Pilot project for GPS tracking system for marine craft.	15.00	New

BE SCHEME WISE FOR 2015-16

Sl No	Name of the Scheme	BE (Rs. in lakhs)	Existing or new scheme
V	Construction of Fish Landing Centres (40:60) 4405-104-12-04-530-531) Development of Fish landing and berthing facilities	1400.00	Existing
VI	Up-gradation and strengthening of fish seed farms (RIDF Funds)-	1600.00	Existing
VII	NON-PLAN, for salaries and maintenance of ongoing schemes	3699.94	Existing
	Grand Total	22418.74	

Policy Interventions required:

Removal of Redundant and unnecessary provisions of G.O. Ms No. 7 are now proposed for amendment to Liberalize regulations for aquaculture licensing,

- ❖Treat Aquaculture on par to Agriculture (Power tariff, Exemption of VAT on feed & Water cess, Provision for irrigation water)
- ❖ Accreditation of fish and shrimp hatcheries and streamlining the AP Aquaculture Seed (Quality Control) Act 2006.
- ❖Policy for procurement and allotment of land for expansion of aquaculture (Hatcheries, aqua export hubs, ornamental fish units, markets) and fisheries sector (Jetties, Harbours, Processing Plants, Oceanarium etc)
- ❖ Creation of more quarantine facilities and increasing the brood stock allotment for L. vannamei.
- ❖ Policy for establishment of Cold storages. Freezing plants and Processing Plants, fishing harbours, jetties, fish landing centre's, shore based facilities, oceanarium & eco-tourism and other infrastructure through PPP mode
- ❖ Leasing policy for promoting mari-culture in coastal waters
- ❖ Restructuring and Strengthening of the Fisheries Department with required staff into 5 wings such as 1. Aquaculture, 2. Marine 3. Regulatory 4. Extension and HRD 5. Planning & Implementation wings.


Fish for Health
Fish for Wealth
Thank You
25

Steps to increase GVA in Agriculture during 2015-16

Sl. No	Crop	Area (lakh ha)		Yield (kg/ha)		Production (lakh MT)		GVA (Rs in Cr.)		Growth in 2015-16	
		2014-15	2015-16	2014-15	2015-16	2014-15	2015-16	2014-15	2015-16	Value	%
1	2	4	5	6	7	8	9	10	11	12	13
1	Paddy	24.01	24.73	3420	3521	82.11	85.29	17243	17911	667.8	3.87
2	Maize	3.01	6.73	6255	6624	18.83	44.58	2467	6018	3552	244
3	Cotton	8.15	8.28	589	650	28.24*	31.66*	5763	6461	998	12.11
4	Groundnut	8.29	10.88	601	774	4.98	8.42	1992	3364	1372	16.88
	Total	43.46	50.62					27465	33754	6589.8	22.90

* Cotton Production in lakh bales of 170 kg lint each

Steps to increase Productivity in Important crops

Rice

- Promoting High Yielding ,Lodging Resistant ,Pest & Disease resistant varieties
- Ensure Optimum Plant Population by Promoting Direct seeding , MSRI (Drum Seeding & Mechanical Transplanting)
- Use of Micronutrients like zinc , based on Soil Test recommendation for improving soil health & productivity
- Efficient On Field Water Management - Rotational irrigation
- Large scale Farm Mechanization using rotavators, transplanters, harvesters & Driers

Maize

- Zero tillage of maize in rice fallows
- Use of Micronutrient like zinc, boron
- Control of Stem Borer
- Special emphasis on baby corn, sweet corn and pop corn varieties

Groundnut

- Popularization of drought tolerant varieties –K9, Dharani ,Anantha
- Application of Gypsum & correction of micronutrient deficiencies –zinc, boron
- Protective irrigation by effective utilization of scarce water resources through community sprinklers & farm pond technology

Cotton :

- Encouraging High density planting system and mechanical picking of cotton
- Correction of Micronutrient deficiencies – Zinc, Boron & Magnesium
- Intercropping of red gram for sustainable returns

Action Plan for the strategies

Rice:

- Varietal replacement in 1.5 lakh ha &
  quality seed replacement in 6 lakh ha
- Direct seeding MSRI (Drum Seeding &
  Mechanical Transplanting) in 4 lakh ha
- Micronutrient application in 6 lakh ha
- Green manuring in 2.5 lakh ha

Maize:

- Additional area under Maize 3 lakh ha in rabi
- Zero tillage in 1 lakh Ha
- Micronutrient supply in 1.23 lakh ha

Groundnut:

- Application of gypsum and micronutrients 3.5 lakh ha
- Varietal replacement in 2 lakh ha

Cotton:

- High density planting in 3000 ha on pilot
  basis
- Micronutrient supply in 1 lakh ha

Agriculture Investment Opportunities In A.P. (PPP)

- On 24-02-2015 a Conference was organized by FICCI in association with SFCI & Govt. of A.P inviting for investment opportunities in Agriculture in A.P.
- No of companies participated :40
- No of companies presented proposals :19
- Total investment indicated by 19 companies : Rs.500 crores in 2015-16
- No of farmers getting benefitted in the above proposals : 8 lakhs
- Total area proposed to be covered under PPP :2.75 lakh ha
- 19 Companies have sent the DPRs so far and some more proposals are expected by end of this month
- Discussions were held with 5 companies and finalization of MOUs of companies who have submitted the DPRs will be completed before 7th April 2015

Welcome

To

Delegates of primary sector mission

PRESENTATION ON PRIMARY SECTOR MISSION

Productivity of Horticulture crops
India Vs Andhra Pradesh

Sl. No	Name of the Crop	Productivity Tons per Ha. in A.P and its Rank in India		National average productivity (Tones / Ha)	Highest Productivity States		Leading country Tons/Ha
		Andhra Pradesh	Rank in India		State	Productivity Tones/ HA	
1	2	3	4	5	6	7	
1	Banana	35.00	6	34.20	Madhya Pradesh	66.00	Indonesia 58.9
2	Sweet Orange	15.00	2	10.80	Karnataka	17.00	Turkey 36.3
3	Acid Lime	15.00	3	9.90	Karnataka	23.30	20.0
4	Mango	9.00	5	7.20	Uttar Pradesh	16.00	Kenya 48.8
5	Papaya	80.00	2	40.70	Tamilnadu	191.00	Dominian Republic 312.7
6	Pomegranate	10.00	4	6.60	Tamilnadu	31.30	30.0
7	Guava	15.00	6	13.60	Madhya Pradesh	37.60	Kenya 48.8
8	Sapota	10.00	4	9.10	Tamilnadu	31.70	35.0
9	Tomato	20.00	6	20.70	Karnataka	33.20	USA88.0
10	Onion	18.00	5	16.00	Gujarat	24.40	USA 54.6
11	Oilpalm	12.00	1	8	Andhra Pradesh	12.00	20.0

TARGETTED GVA AND PRODUCTION FOR 2015-16 AT CURRENT PRICES

Horticulture	2013-14		2014-15		2015-16	
	GVA (in Crores)	Prod. (in '000 MTs)	GVA (in Crores)	Prod. (in '000 MTs)	GVA (in Crores)	Prod. (in '000 MTs)
Growth Engines						
1.Chillies	3855	602	3767	524	5300	1060
2.Banana	3717	1888	6727	2870	8200	4500
3.Mango	3248	2737	3435	2886	4377	3648
4.Batavia	1037	1331	1176	1331	1411	1176
5.Cashewnut	716	88	814	90	1196	120
6.Tomato	5037	3354	3589	2400	8036	6680
7.Oil Palm	604	930	696	1024	1575	2100
8.Lemon	974	582	1382	583	1570	631
9.Papaya	1480	1545	1220	1488	2052	1710
8.Others	13449		22109		19272	
TOTAL	**33513**		**35417**		**50003**	
INCREMENT IN GSDP			**1904**		**14586**	
BUDGET (Rs. in Crore)			219		310	

GROWTH ENGINES OF HORTICULTURE FOR 2015-16

Sl. No	Crop and component	Area (Lakh Ha)	Production (lakh Mt)	Value (Rs. In Crores)
1	Banana	0.90	45.00	8200
2	Chillies	2.12	10.60	5300
3	Tomato	1.67	66.80	8016
4	papaya	0.19	17.10	2052
5	Sweet orange	0.98	11.76	1411
6	cashewnut	0.82	0.98	4920
7	Mango	3.04	36.48	4377
8	Coconut	1.21	27225 Lakh nuts	3267
9	Onion	0.55	11.00	1320
10	oilpalm	1.05	21.00	1575
11	Cocoa	0.18	6.50	150
12	Lime	0.25	4.00	800
13	Floriculture poly houses and shadenets	150 UNITS	900 Lakh flowers	49
14	Vegetable cultivation under polyhouses and shadenets	700 UNITS	0.28	80

DISTRICT WISE SPECIFIC INTERVENTION PROPOSALS

Sl. No	Crop	Interventions	Production in Lakh Mt	Focus district
1	Cashew	promotion of processing industries and value addition	1.38	Srikakulam
2	Mango,veghetables	IPM and promotion of post harvest infrastructure	18.13	Vizianagaram
3	Coffee	Area expansion, rejuvenation, organic certification, baby pulpers	0.89	Visakhapatnam
4	Coconut, cocoa And nurseries	Multiple cropping, value addition and promotion of nurseries	22119.00	East Godavari
5	Oil palm and Cocoa	Area expansion,intercropping and processing	21.12	West Godavari
6	Mango	IPM and promotion of post harvest infrastructure	22.67	Krishna
7	Chillies	processing and value addition, silpaulin sheets for drying	4.60	Prakasam
8	Chillies	value addition and pesticide residue testing labs	9.00	Guntur
9	Capsicum, Pomegranate	Protected Cultivation, INM,GMP,Postharvest infrastructure	0.79	Ananthapuramu
10	Capsicum, Banana	Protected Cultivation, Tissue culture plant material, high density plantation, IPM, propping, Bunch sleeves, Ripening chambers	66.00	Cuddapah
11	Capsicum, Tomato, Rose and mango	Protected Cultivation, mechanized trellies Value addition and post harvest infrastructure	88.00	chittoor
12	Acid lime	drip irrigation, mulching, post harvest infrastructure	2.97	Nellore
13	Onion	Hybrid varieties,processing and value addition and storage structures	16.50	Kurnool

INTERVENTIONS TO INCREASE YIELDS OF MAJOR HORTICULTURE CROPS

Sl. No	Crop	Present Yield	Increased yield due to interventions	% of increase	Interventions
1	Cashew	0.7 Tons / Ha	1.0 Ton	40%	Cashew Graft + Rejuvenation + IPM+ Drip + Fertigation + Mulching + Farm Mechanization+processing units
2	Mango	9 Ton / Ha	12 Ton	30%	High Density plantation + IPM + Rejuvenation + Canopy Management + Drip + Fertigation
3	Pomegranate	10 Ton / Ha	15 Ton	50%	Good Management Practices + IPM + Mulching + Drip + Fertigation
4	Banana (T.C)	35 Ton / Ha	50 Ton	42%	T.C. Banana + High Density + Drip + Mulching
5	Papaya	80 Ton / Ha	90 Ton	12%	Viral resistant varieties + IPM + Drip + Fertigation
6	Tomato	20 Ton/Ha	150 Ton / Ha	65%	Poly houses + Shadenet houses + IPM + Mulching + Fertigation
7	Onion	18 Ton / Ha	20 Ton / Ha		New Varieties + Drip+storage structures+value addition onion flakes
8	Other vegetables	12 Ton	18 Ton / Ha		Drip Irrigation + Fertigation + Minimal processing units

KEY GROWTH ENGINES AND SPECIFIC INTERVENTIONS

Sl. No	District	Crop	Interventions	Production in Lakh Mt	Value Rs in Crores	INSTITUTIONAL SUPPORT
1	Srikakulam	Cashew	promotion of processing industries and value addition	1.38	1718.75	NHM,DCCD COCHIN, Govt. of Goa
2	Vizianagaram	Mango	IPM and promotion of post harvest infrastructure	18.13	1515.36	NIPHM, APEDA,HORTICULTURE UNIVERSITY
3	Visakhapatnam	Coffee	Area expansion, rejuvenation, organic certification, baby pulpers	0.89	106.92	COFFEE BOARD, TRIBAL WELFARE DEPT
4	East Godavari	Coconut,cocoa and nurseries	Multiple cropping, value addition and promotion of nurseries	22119.00	2211.90	COCNUT DEV BOARD,CPCRI COIR BOARD ,NHB
5	West Godavari	Oil palm and Cocoa	Area expansion,intercropping and processing	21.12	1584.00	NRC OP,OILPAM COMPANIES
6	Krishna	Mango	IPM and promotion of post harvest infrastructure	22.67	2852.74	IIHR,CFTRI,JICA

Sl. No	District	Crop	Interventions	Production in Lakh Mt	Value Rs in Crores	TECHNOLOGICAL SUPPORT
7	Prakasam	Chillies	processing and value addition, silpaulin sheets for drying	4.60	2640.00	SPICES BOARD, AVRDC,ITC
8	Guntur	Chillies	value addition and pesticide residue testing labs	9.00	5280.00	SPICES BOARD, AVRDC,ITC
9	Ananthapuramu	Capsicum, Pomegranate	Protected Cultivation, INM,GMP,Postharvest infrastructure	0.79	396.00	NRC POMEGRANATE,APEDA
10	Cuddapah	Capsicum, Banana	Protected Cultivation, Tissue culture plant material, high density plantation, IPM, propping, Bunch sleeves, Ripening chambers	66.00	6600.00	BANANA RESEARCH STATION,TC BANANA COMPANIES,APEDA
11	chittoor	Capsicum, Tomato,Rose and mango	Protected Cultivation, mechanized trellies Value addition and post harvest infrastructure	88.00	13200.00	AVRDC,JICA,PFDC
12	Nellore	Acid lime	drip irrigation, mulching, post harvest infrastructure	2.97	1856.58	CITRUS RESEARCH STATION,APEDA,MARKETING DEPT
13	Kurnool	Onion	Hybrid varieties,processing and value addition and storage structures	16.50	1980.00	AVRDC,NAFED, HORTICULTURE UNIVERSITY

EXPECTED INCREASES BY THE NEW INTERVENTIONS IN HORTICULTURE CROPS DURING 2015-16

Sl. No	Name of the Component	Crop	Area (in Acres)	Yield (per Acre)	Total Yield	Rate / Ton	Total Value (in Crores) (Revenue for one year)
1	Protected Cultivation	Capsicum	300	50 T	15000 T	40,000	60.00
	Poly Houses / Shadenet Houses	Chinese Keera	300	4 T	1200 T	15,000	1.80
		H. Tomato	200	60 T	12000 T	10,000	12.00
		Roses	100	7 Lakh (Flowers)	7 Crores	Rs. 4/- Flower	28.00
						Rs. 7/-	49.00 (Export)
	SUB-TOTAL		900				150.80
	Area expansion with Micro Irrigation						
2	Tissue Culture Banana	T.C. Banana	5000	30 T	150000	10,000	150.00
3	Pomegranate	Pomegranate	2000	7 T	14000	55,000	77.00
4	Papaya	Papaya	2000	80	16000	10,000	16.00
5	Cocoa area expansion	Cocoa	10000	1 T	10000	1.5 lakh / Ton	150.00
6	Micro Irrigation	Micro Irrigation	2,50,000 (Acres)	30% in acres	12.5 Tons (increase yield)	20000	25.00
7	Post Harvest Losses	-	210 units (each 5000 MTs Capacity)	30% (Saving)	1.05 Lakh MT (10%)	20000	210.00
8	Vegetable cultivation under pandals, trellies and urban clusters	Vegetables	10,000	25 T	2.5 Lakh MT	20000	500.00
9	Oilpalm	Oilpalm	2.50 Lakhs	20 T	50 Lakh MT	7000	3500.00
	TOTAL						4778.80

CONTRIBUTION OF HORTICULTURE SECTOR TO GROSS DOMESTIC PRODUCT

Sl. No	Component	2014-15	2015-16
1	Budget (Rs. in Crores)	219	310.00
2	Contribution to GSDP (Rs. in Crores)	35417	50003
3	% of increase	41%	

THANK YOU

BANANA

District	Area (Ha)	production	productivity	Technological interventions
kadapa	17485 ↓ 20000	6.11 lakh mt ↓ 10.00lakh mt	35tons/ha ↓ 50tons/ha	Tissueculture banana variety Grand nainee in additional 2500ha.drip irrigation + fertigation , mulching propping ,IPM and INM, (micronutrients boran,zinc,mg and sulphur) Ripening chambers
ananthapuramu	10260 ↓ 12000	3.59 lakh mt ↓ 6.00 lakh mt	35 tons/ha ↓ 50 tons/ha	Tissueculture banana variety Grand nainee in additional 1800ha.drip irrigation + fertigation, , mulching propping ,IPM and INM, (micronutrients boran,zinc,mg and sulphur) ripening chambers.

CHILLIES

District	Area (Ha)	production	productivity	Technological interventions
Guntur	134000	4.02lakh mt ↓ 6.03 lakh mt	3.00tons/ha ↓ 4.5 tons/ha	Promotion of FPPOs, IPM and INM, Micro Irrigation + Fertigation ,Multi layered solar drying units, pesticide residue testing labs
prakasam	31484	0.94 lakh mt ↓ 1.42 lakh mt	3.00tons/ha ↓ 4.5 tons/ha	Promotion of FPPOs, IPM and INM, Micro Irrigation + Fertigation ,Multi layered solar drying units, pesticide residue testing labs
Kurnool	15485	0.46 lakh mt ↓ 0.69 lakh mt	3.00tons/ha ↓ 4.5 tons/ha	Promotion of FPPOs, IPM and INM, Micro Irrigation + Fertigation ,Multi layered solar drying units, pesticide residue testing labs

TOMATO

District	Area (Ha)	production	productivity	Technological interventions
Chittoor	30295	6.05 lakh mt ↓ 12.11 lakh mt	20 mt /ha ↓ 40 mt/ha	Introduction of suitable varieties for processing, mechanised trellies, protected cultivation (Polyhouses/Shadenet houes), mulching+drip+fertigation, establishment of processing units, promotion of FPPOs and solar drying units.
kurnool	36000	7.20 lakh mt ↓ 14.40 lakh mt	20 mt/ha ↓ 40mt/ha	Introduction of suitable varieties for processing, mechanised trellies, protected cultivation (Polyhouses/Shadenet houes), mulching+drip+fertigationestablishment of processing units, promotion of FPPOs and solar drying units

PAPAYA

District	Area (Ha)	production	productivity	Technological interventions
Ananthapuramu	7893	6.31 lakh mt ↓ 7.10 lakh mt	80 tons/ha ↓ 90 tons /ha	Introduction of virus resistant varieties like Redlady, Surya, Insect net proofing, drip irrigation ,mulching, papain extraction, IPM and INM,Promotion of FPPOs
kadapa	5941	4.75 lakh mt ↓ 5.34 lakh mt	80 tons/ha ↓ 90 tons /ha	Introduction of virus resistant varieties like Redlady, Surya,I nsect net proofing, drip irrigation,mulching, papain extraction, IPM and INM,Promotion of FPPOs

PR MAR ECTOR M O
TEGRATED ATER HED MA AGEME T PROGRAMME
A DHRA PRADE H

WATERSHED OBJECTIVES

- Restoring the ecological balance by harnessing, conserving and developing degraded natural resources
- Increased agricultural production & productivity through scientific approach & sustainable agriculture practices
- Integrated livestock management for increasing incomes
- Livelihood security for the poorest of the rural poor

STATE PERSPECTIVE STRATEGIC PLAN OF IWMP

S. No.	Item			Details	
				No.	Area (lakh ha)
1	Total micro-watersheds (MWS) in the State			26,700	160.20
2	Total untreatable MWS (Barren Rocky, assured irrigation, etc.)			6837	34.18
3	Total treatable MWS in the State (1-2)			19863	126.02
4. a	Total MWS covered under Pre-IWMP schemes of DoLR			2686	13.43
b	Total MWS covered under schemes of other Ministries			325	2.66
c	Total MWS covered under IWMP upto 2014-15 of DoLR			3,948	18.10
d	Total of 4 a to c			6959	34.19
5	Balance micro-watersheds not covered till date (3-4d)			12904	91.83
	Plan for covering balance micro-watersheds	12th Plan	2015-16	269	13.45
			2016-17	220	11.00
		13th Plan		559	27.94
		14th Plan		349	17.47
		Total		1397	69.86

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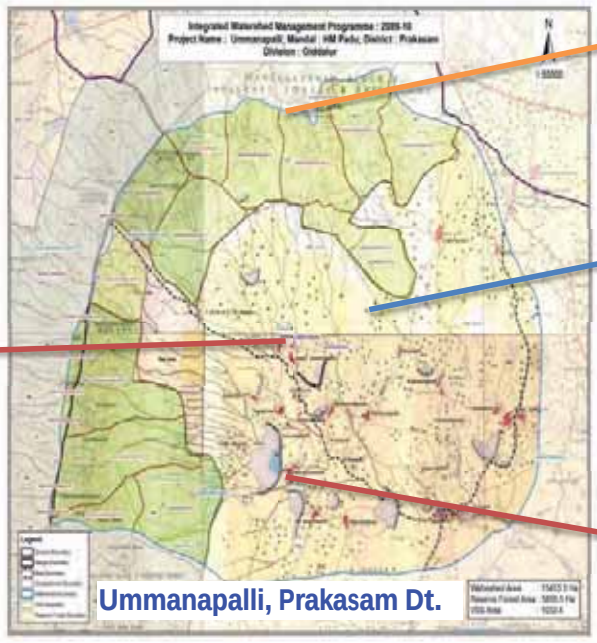


SMC & WHS works to be taken up in Forest areas with MGNREGS / CAMPA funds and execute works through VSS.

SMC , WHS , Horticulture & Plantation works to be taken up in 1st, 2nd & 3rd order streams with IWMP & MGNREGS funds and execute works through WSC, UGs, SHGs etc.,

Production System Enhancement & Livelihoods activities to be taken up in convergence with Ag. AH, SHGs (SERP), Sericulture Depts., with IWMP/MGNREGS funds and execute through WSC, UGs, SHGs etc.,

In Minor Irrigation area Micro Irrigation, SMC & WHS works to be taken up in convergence with IWMP/MGNREGS/Minor Irrigation/Ground Water Dept., with IWMP/MGNREGS funds and execute works through farmers organisation (WUAs) & GP etc.,

CO VERGE CE PART ER

NRSC/APSRAC

Rural Development Dept.

(WSC & SSS)

Forest Department
(VSS, WSC)

Irrigation Dept.
(WUA & WSC)

WATER DEVELOPMENT

Horticulture Department
& AP Micro irrigation Project
(APMIP)

Fisheries Dept.

Agriculture Dept. (Farmer groups)

Animal Husbandry Dept.
(WSC & Para vets)

MAJOR INITIATIVES UNDER IWMP

Production systems improvement (AH)

Natural Resource Management

Institution Building

Production systems improvement (Agrl)

Capacity Building

Livelihood enhancement for asset less poor

Entry Point Activity

DPR preparation

IWMP ACTION PLAN

Subject to availability of the funds and Act guide lines

S No	Core areas of Development		FY 2014-15		FY 2015-16		FY 2016-17		FY 2017-18		FY 2018-19	
			Physical	Financial (Rs. In Cr)	Physical	Financial (Rs. In Cr)	Physical	Financial (Rs. In Cr)	Physical	Financial (Rs. In Cr)	Physical	Financial (Rs. In Cr)
1	2		3	4	5	6	7	8	9	10	11	12
1	NRM	WHS	21011	111.11	35019	185.19	42022	222.23	28015	148.15	14007	74.08
		SMC	11673	61.73	19455	102.88	23346	123.46	15564	82.31	7782	41.15
		Plantation	54360	91.95	74672	126.31	87597	148.15	69684	117.85	53636	90.71
		Sub-total	**87044**	**264.79**	**129145**	**414.38**	**152965**	**493.84**	**113263**	**348.31**	**75425**	**205.94**
2	**PSI (Agri. & AH)**		50249	48.742	83749	81.24	100498	97.48	66999	64.99	33499	32.49
3	**LH (Farm Based)**		9700	24.248	8259	20.643	8136.1	20.342	7915	19.789	8008	20.02
Total			**146993**	**337.78**	**221153**	**516.26**	**261599**	**611.66**	**188176**	**433.09**	**116932**	**258.45**

MGNREGS ACTION PLAN

Subject to availability of the funds and Act guide lines
(Rs. In Crores)

Sl.No	Name of the Department	2014-15		2015-16		2016-17		2017-18		2018-19	
		RD Share	Dept Share	RD Share	Dept Share	RD Share	Dept Share	RD Share	Dept Share	RD Share	Dept Share
1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*
1	RD-MGNREGS	4422.25	0.00	4721	0.00	5187	0.00	5456	0.00	5855	0.00
2	RD-IWMP	40	51.95	44	82.31	49	98.77	52	65.85	56	34.71
3	Animal Husbandry Dept	47.7	5.98	47.5	5.98	59.94	5.98	72.55	5.98	92.6	5.98
4	Forest Department	332.45		385.97		422.47		477.20		508.15	
5	Fisheries Department	75	0.00	120.00	0.00	150.00	0.00	180.00	0.00	216.00	0.00
6	Horticulture Dept	0.51	12.14	0.51	12.14	0.51	12.14	0.51	12.14	0.51	12.14
7	Horticulture Dept-MIP	37.46	29.92	156.65	124.07	156.65	124.07	69.49	55.12	59.55	47.25
8	MI Department	50.76	0.00	166.50	0.00	175.86	0.00	183.42	0.00	223.44	0.00
9	Sericulture Department	97.17	22.27	97.17	22.27	97.17	22.27	97.17	22.27	97.17	22.27
	Total	5103.3	122.26	5739	246.77	6299	263.23	6588	161.36	7109	122.35

RURAL DEVELOPMENT DEPARTMENT
NEERU-CHETTU ACTION PLAN FOR NEXT 5 YEARS
(FROM 2014 -15 TO 2018-19)

Sl. No.	category of works	Units	Estimated Cost	
			Phy.	Fin. (in Crores)
1	Water Harvesting Structures (WHS)	Nos.	2,96,682	6,712
2	Soil Moisture Conservation (SMC) Works	Nos.	5,67,817	1,187
3	Silt application (Desilting of Tanks)	Acres	10,85,231	1,085
4	Horticulture and other plantation works	Acres	6,96,300	6,016
Grand Total				15,000

E PECTED OUTPUT OUTCOME
E T VE EAR

- **30 lakh hectares to be treated & rectification in area already treated**
- **Rs.15,000/- per hectare income increase aimed**
- **5 lakhs ha dry land horticulture & 1.96 lakhs ha of other plantations**
- **20% of area to be brought under sustainable agriculture practices.**
- **Quality drinking water available for people and cattle even during the summer.**
- **Increase in ground water table by (1 - 2 mtr)**

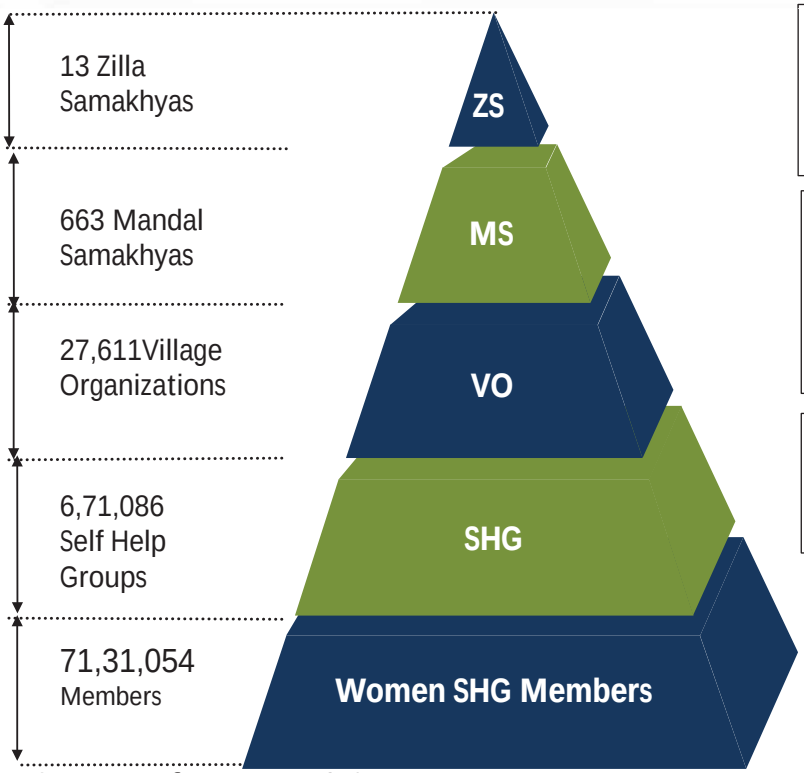

Thank You!

Role of FPOs

SERP

Linkages with Primary Sector Mission

Institutions of Rural Poor



Quality Control of MSs
Capacity Building of MSs & Vos
Insurance & Social Safty Nets
Providing Jobs to Youth
Convergence with Govt. Depts

Quality Control of VOs
Capacity Building of SHGs & VOs
CIF Management
Auditing of SHGs & VOs accounts
BMCUs Management
Social Issues

Quality Control of SHGs
On-Lending CIF to SHGs
Collective Procurement
Health, Education & Social Issues

Savings
Internal Lending
Accessing Credit from Banks

Coverage of Poor HHs: 95%

Total Savings : Rs 3,290.40 Crs.

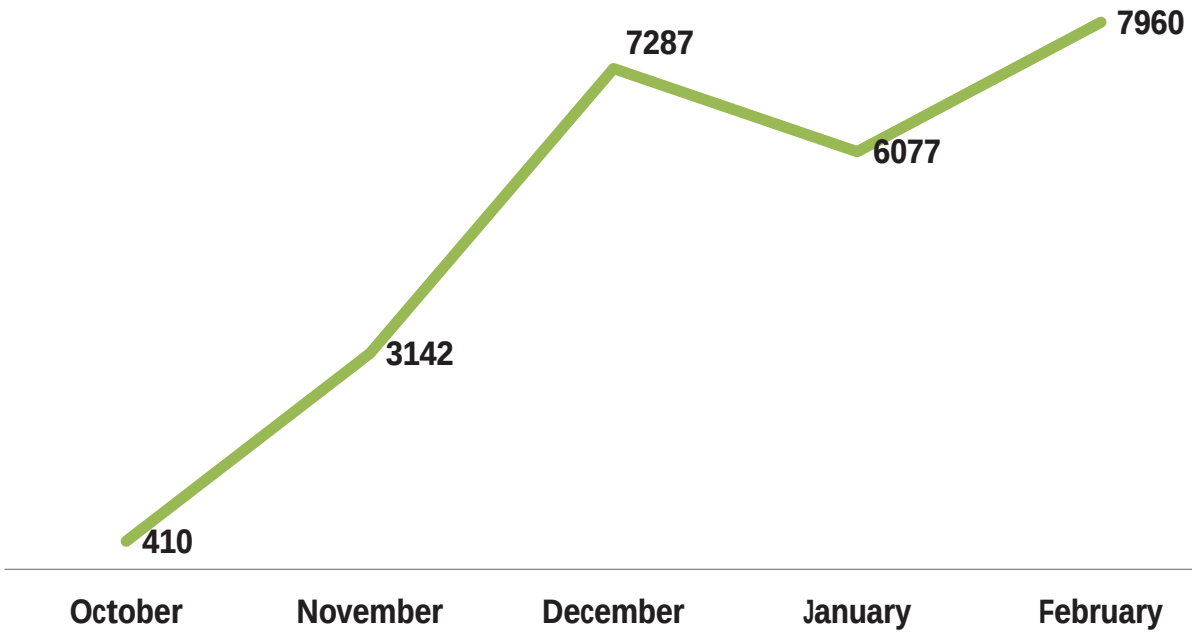
Coverage of GPs: 100%

Total Corpus : Rs 4,339.98 .

SERP Strengths

- Membership- 71 Lakh SHG Members
- Ready Access to Credit- Rs. 13,000 Crores
- Presence in all villages and hamlets of the state- 100% Coverage
- Strong, Resilient Staff- 6000 from Project, 21000 from Community
- Range of Skills- Institution Building, Capacity Building, Economic and Social Development

Sand Mining Sales (Rs. Lakhs)



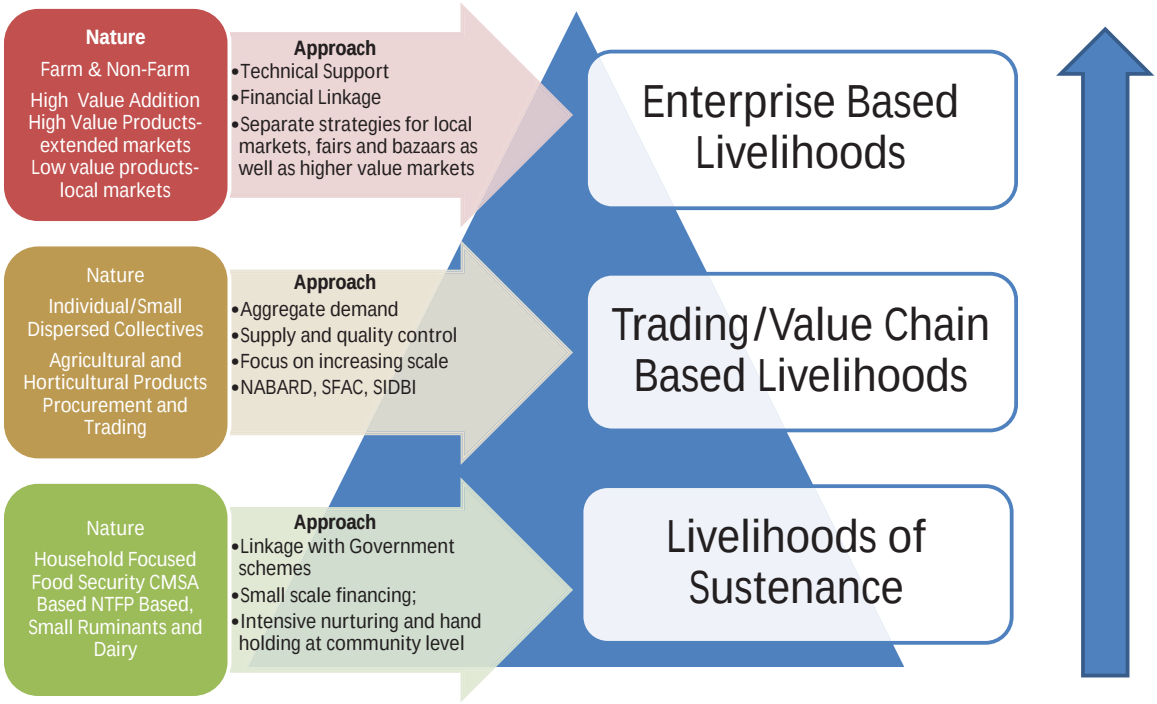
Strategic Drivers

- **Focus on**
  - Conversion of credit into economic outcomes
  - Conversion of social capital into human development outcomes
  - Rights based and Gender based issues
- **Reorientation of the organisation to reflect in**
  - Revived IB Strategy
  - Renewed Livelihoods Strategy
  - Revised HD strategy

Challenges

- **Moving Livelihoods to the centre of the empowerment approach**
  - Comprehensive, Cohesive Livelihoods Strategy
  - Facilitating multi-disciplinary/ multi-sector support
- **Balancing Scale and Sensitivity**
  - Customised to the current scale of SHG movement in the state
  - Re-orienting staff

Livelihoods Approach



SERP- Primary Sector Mission

- **In pilot areas, support for institutions of farmers/SHG women/milk pourers as per need**
  - **Social Mobilisation**
  - **Capacity Building**
  - **Institutional Frameworks**
  - **Technical and Management Support**
  - **Market Linkages**
- **Conversion and post production links to enterprises**
  - **Pickles**
  - **Food Processing**
  - **Sustainable/Organic**

APRIGP- 150 Most Backward Mandals

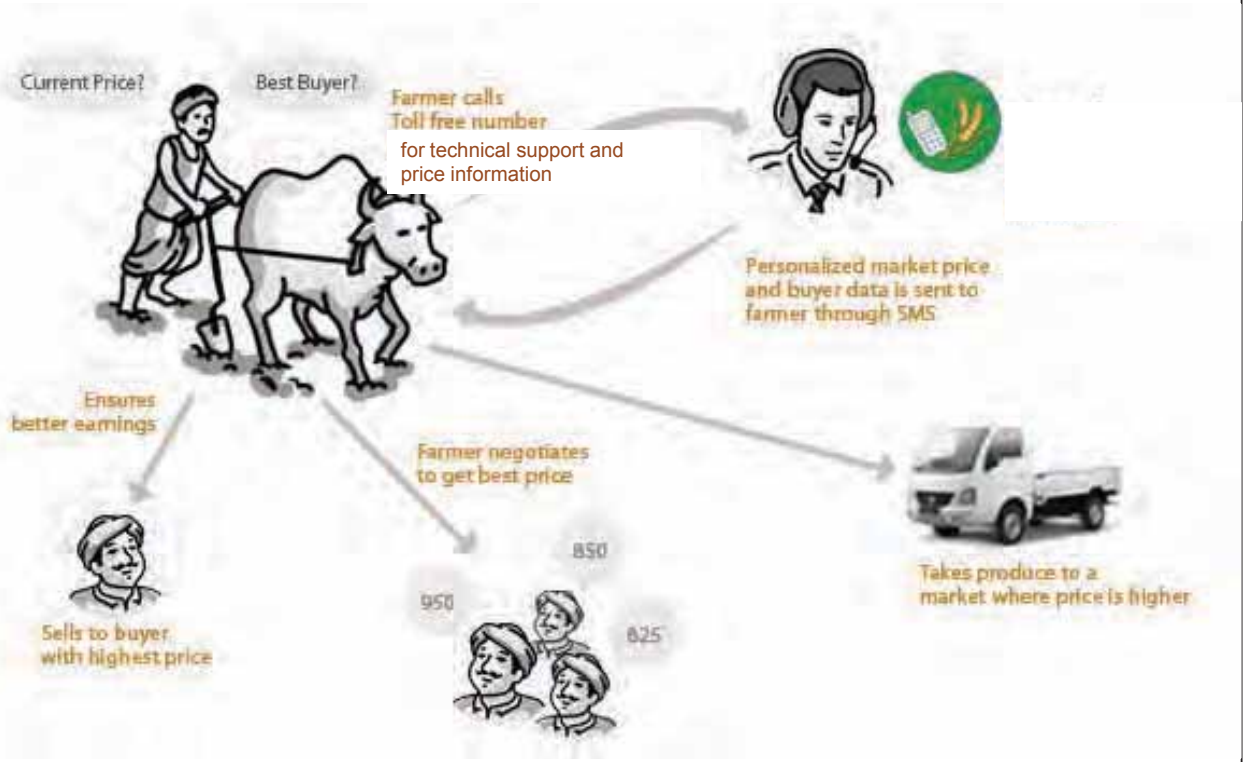
Component 1: Rural Livelihoods	
Activities	Outcomes
•Rural Value Chains & Rural Retail Chains •Productive Assets •Increase in Productivity •Value Chain Development •Credit and market Linkages •Creation of micro markets	About 250,000 producers (of whom at least 70% are poorest) increase their income by at least 50% through livelihood diversification, productivity enhancement and improved market access

BMCU Status

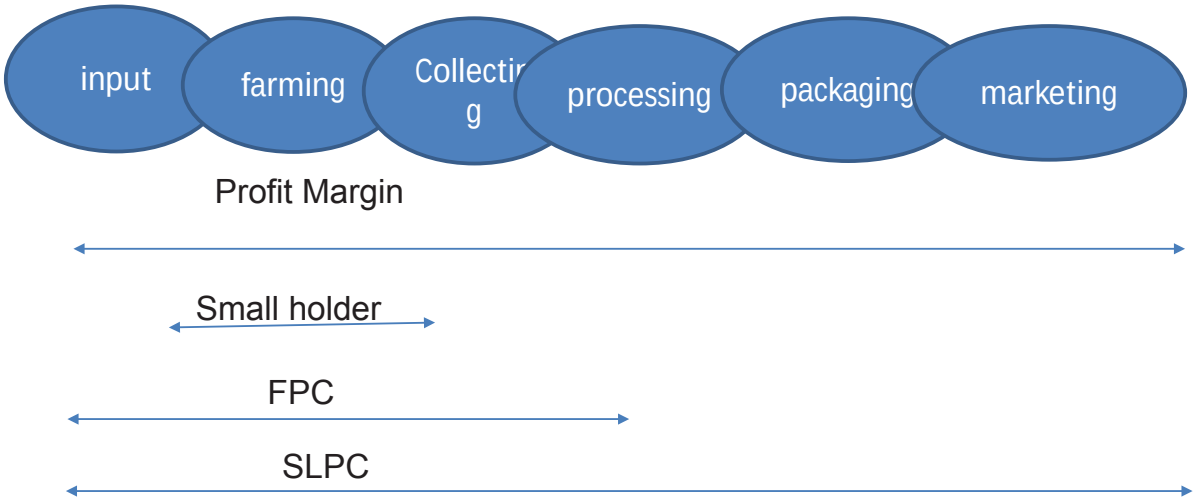
District	BMCUs	Beneficiaries
CHITTOOR	94	39220
KADAPA	7	1100
ANANTAPUR	5	2500
WEST GODAVARI	3	4700

Promotion
of
Farmers Producers Companies (FPCs)

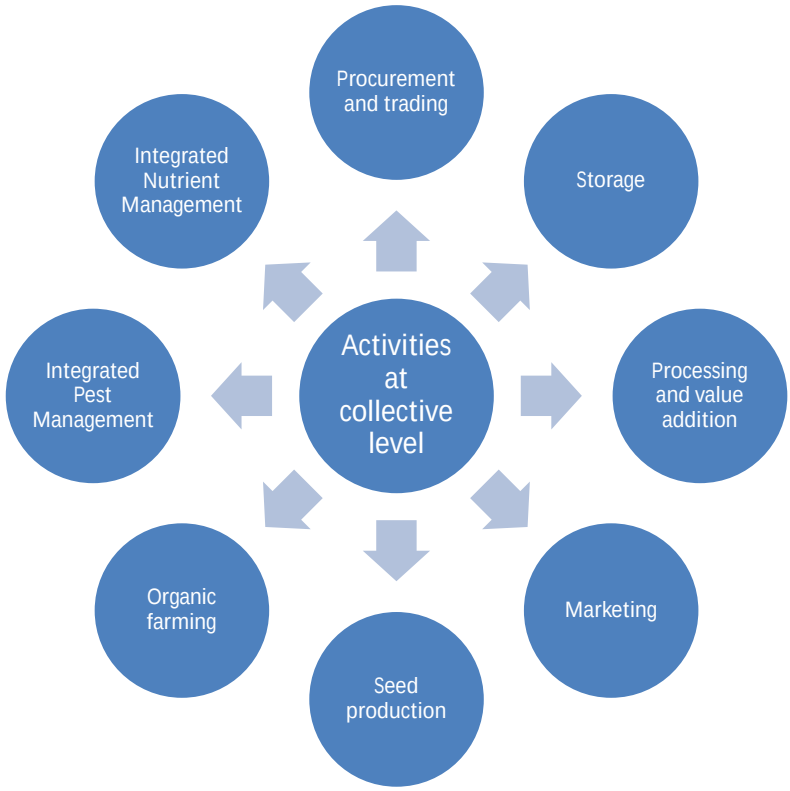
Why FIGs and FPOs ???



Need of FPC



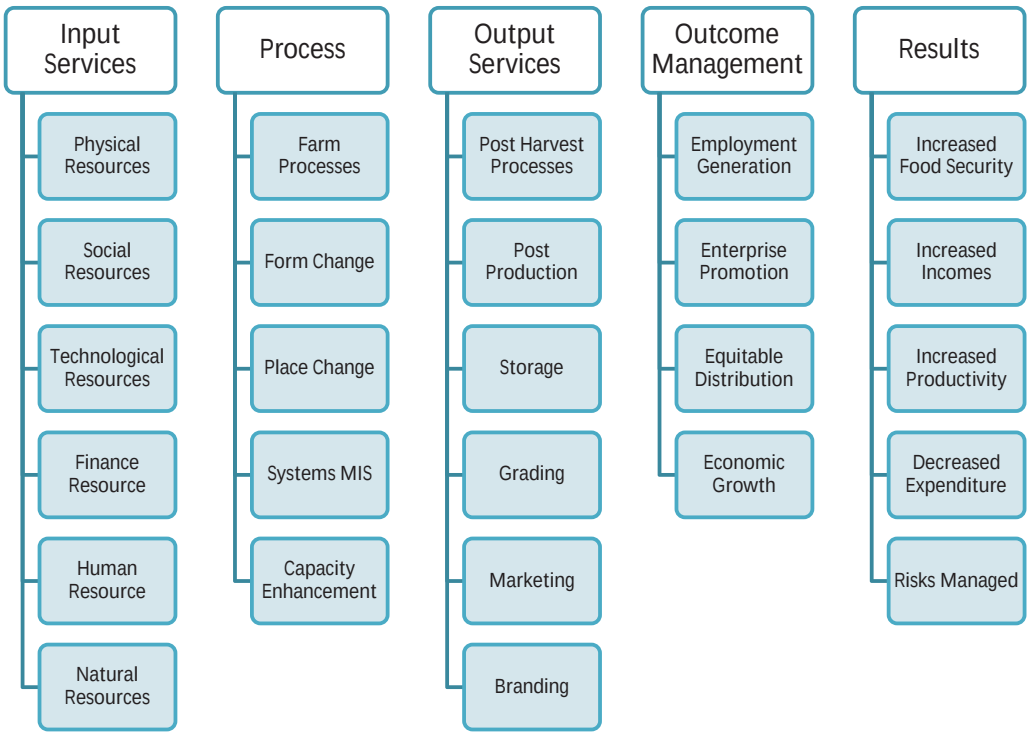
What FPC does?? Farming as Agri business



GoAP FPO Strategy-Approaches

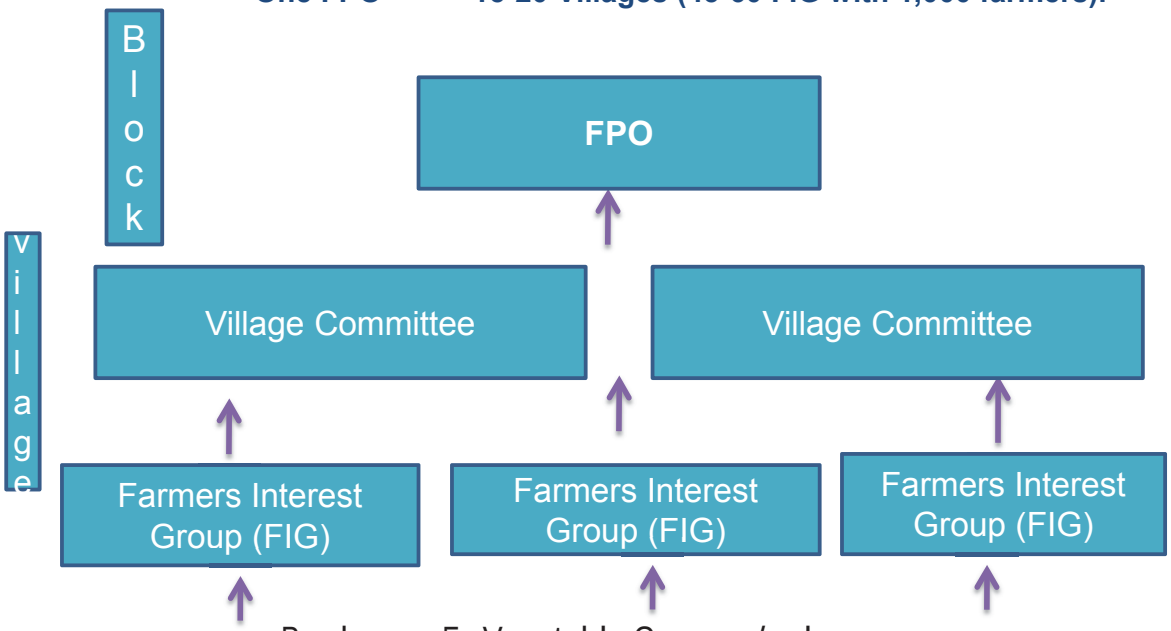
Integrated Service Model	• Address gaps across the value chain
Processing& Value Addition	• For procurement, processing, value addition and storage • Breakeven from year 2nd years or 4 seasons
GoAP-ICRISAT Pilot Area	• To have viable business operations of procurement, transportation, storage, technology dissemination, etc
Focus on Growth Engines	• High value crops, processing and value addition with branding
Farming Systems	• Paddy, Maize, Dairy
Producer to Consumer	• To realise fair share in the value
Start with Market	• To reduce the costs and tap local demand • To become leader in local market

Agri Value Chain Services Framework



Farmers' Producers' organization (FPO) Structure

- One FIG = 10-20 Farmers.
- One village = 1- 4 FIG (15 to 60 Farmers)
- One FPO = 15-20 Villages (45-60 FIG with 1,000 farmers).



Producers: Ex Vegetable Growers/pulse growers

Business Model - Dairy

- 5000-10000 women members
- 10 KLPD-25 KLPD Processing Unit
- Local Marketing, Brand Building
- Toned milk, Full cream milk, Ghee, Butter Milk
- Livestock Service Centres – Feed/ Fodder, Vaccination, AI
- Cattle Infusion & Captive Dairy Farms

Warehousing and Trading

- Commercial procurement of all qualities of produce of members of all major crops at their doorsteps in required time
- MSP procurement by acting as Intermediary for government procurement agencies
- Storage of agricultural produce, inputs, seeds and processed products by owning a Warehouse of 2000 MT
- Trading of agricultural produce

Processing

- Processing of Redgram Bengalgram, Groundnut into value added products by owning a Dal Mill of 2.5 TPH capacity& Oil Extraction Unit
- Marketing of processed products

Seed Production

- Provision of foundation seed, inputs and teechnology to select members to produce improved seed on their farms
- Procurement of raw seed produced by members
- Processing of raw seed by owning a seed processing unit of 2.0 TPH capacity and distribution to members
- Packing, labelling and marketing of certified seed

Farmers Service Centre (FSC)

- Input services (trading of fertilizers, organic materials and seeds by having dealership)
- Organic material production units
- Technical services - technical advice, trainings, demonstration plots, FFS, learning tours etc
- Financial services-savings , agricultural credit and crop insurance
- ICT services-SMS based messages, smart cards etc

Plan: Districts-Commodities- FPOs

- AP FPO.xlsx

District wise		
District	FPOs	Farmers
East Godavari	6	18000
West Godavari	3	3000
Krishna	3	12000
Nellore	3	3000
Guntur	10	34000
Prakasham	9	30000
Vijayanagaram	3	12000
Srikakulam	6	18000
Vishakapatnam	3	3000
Kadapa	3	6000
Kurnool	15	42000
Chittor	3	6000
Ananthapur	9	33000
Total	76	220000

Commodity wise		
Dairy	12	60000
Tomato	6	12000
Onion	3	6000
Chilly	6	12000
Banana	6	12000
inland Fisheries	9	9000
Marine Fish	9	9000
Paddy	12	48000
Maize	6	24000
Cotton	4	16000
Ground Nut	3	12000
Total	76	220000

FINANCE REQUIREMENT (Rs.lakhs)

FPO Financials	INR Lakhs	Remarks
No of active farmers	3,000	
No of Villages	10	
FPO Project management Cost	30	Grant
FPO Management cost	30	Grant
Investment /equity	500	Term Loan, Equity, Venture Capital, Margin Money, Grant
working capital	1,200	Bank Loan
Turnover	3,000	FPO

With promotional fund of Rs. 30.00 lakhs for one FPO, Finance of Rs. 5.00 crores and Rs.12 crores will be raised for the business of the FPO.

Also with promotional fund, each FPO will be promoted with 1,000 member base initially, will be expanded to at least 3,000 in further years.

Details : AP FPO excel sheet

Expected output & Impact

Economic Impact (compared to the baseline)

- Per hectare production improved by 10% by end of project period
- Increase in net return to farmer (Inflation +10%)
- Reduce gap in availability of inputs by 20-25%
- Institutional viability
- Increase in sub-sector development for agriculture
- Increased food & nutritional security
- Market linkage for backward and forward integration will be ensured
- Additional employment generated due to increased intensity of farming
- Benchmark minimum wage rate for labor (for men and women separately)

Social Impact

- Social capital built in the form of FPOs
- Improved gender relation & decision making of women farmers in FO & FPOs – No. of women in key/ board member positions
- Increased bargaining power for input purchase and output marketing
- Reduce social conflicts and risks and enhance welfare at household level
- Improved food and nutritional value
- Leadership role of producers in technology absorption
- Environment- carbon credit
- Reduction in Migration
- Positive health and nutrition effects for users

Of the farmers , By the farmers, For the farmers

Measurable Outcomes

#	Outcome	Current	By 2020
1	Increase in % share of value to the producer	35-38%	50%
2	Increase in income to producer (Rs. annum)	50,000-60,000	1,00,000-1,20,000
3	Access of members for processing (% of commodity)	0%	70%
4	Access to finance for FPO (Rs. crore per annum)	0	12
5	Reduction in gap in availability of inputs	-	By 40-50%
6	Seed Replacement Rate	15-20%	40%
7	Reduced Costs	-	20-25%

Monitoring Indicators

CATEGORY	INDICATOR	UNIT	PERIODICITY
FINANCIAL& BUSINESS EFFICIENCY	Turnover (Sales + Indirect Revenue)	Rs. Lakhs	Quarterly
	Net profit	Rs. Lakhs	Quarterly
	Current ratio (Current assets to Current liabilities)	Ratio	Quarterly
	% value (& volume) of business to breakeven value (& volume)	%	Half yearly
	Inventory Turnover Ratio	%	Quarterly
	% of marketing expenditure to total turnover	%	Half yearly
ECONOMIC	Ratio of member realisation to total turnover	Ratio	Half yearly
	Average per member realization	Rs. Thousands	Half yearly
	Per member turnover	Rs. Lakh	Half yearly
	% income from the enterprise to member to total income of member	%	Annually
	% patronage by members to total patronage	%	Half yearly
SUSTAINABILITY	Extent of organic practices	% of net sown area	Annually
	Seed Replacement Rate	%	Annually
	% renewable energy to total energy	%	Annually
	Pollution control compliance	Yes/ No	Annually

Monitoring Indicators (cond.)

CATEGORY	INDICATOR	UNIT	PERIODICITY
INSTITUTIONAL	Growth in Membership of the enterprise	%	Annually
	% of potential members covered as actual members of enterprise	%	Annually
	% of active members to total members	%	Half yearly
	% of members attending General body meeting	%	Annually
	% of legal compliances met to total number of legal compliances	%	Half yearly
	Proportion of elections happened regularly to total number of elections	Ratio	Annually
	% of members participated in elections	%	Annually
	Proportion of Board Meetings happened regularly to total number of Board Meetings	Ratio	Annually
	Proportion of decisions of the Board Meeting complied to total number of decisions	Ratio	Half yearly
	Proportion of decisions of the AGM complied to total number of decisions	Ratio	Annually
	% of recommendations complied to total recommendations in audit	%	Quarterly
SOCIAL INDICATORS	% members covered from marginalized communities to total members of enterprise	%	Annually
	Number of leaders from marginalized communities	No.	Annually
	% women undertaking direct financial and market transactions	%	Annually
	Increased availability of disposable income with members	Rs.	Annually

Partnerships

#	Area of collaboration	Agency
1	NRM/ Soil& moisture conservation	Watershed programme, NREGA, Land development programmes, MYRADA
2	Investment	RKVY, GBY, NSC, NABARD, FF, AIF, SFAC, SIDBI, SME schemes
3	Working capital	Local banks, NABARD (PODF, UPNRM), WHR loans, NSDC, FWWB
4	Seed production-Redgram, Bengalgram, Groundnut, Jowar	ICRISAT, seed village programme, NSC, SFCI, RKVY
5	Access to improved seed, fertilisers	NFSM block, ISOPOM
6	Chemical fertilisers dealership	IFFCO, KRIBHCO, Nagarjuna
7	Organic material production trainings	CSA, LEISA Foundation, DDS, KVK
8	Organic material production units	RKVY, NPOF
9	Agrl.machinery	RKVY, dept. of agri, MMA
10	Productivity enhancement trainings	FFS/ ATMA, KVK
11	Processing	RKVY, machinery suppliers, processors, MCRB, NMFP (MOFPI), CCD
12	Market linkages, marketing	MARKFED, NCDEX, RML

Required Support from the Government

1. *Seed fund to promote FPOs @ Rs.4000/ member for 1000 member FPO (Rs.2000 for the FPO& Rs.2000 for the Resource Institution)*
2. *Initial Equity for FPO depending on Farmers equity upto 10 lakhs*
3. *Credit guarantee (up to Rs.5 crore/FPO) for credit to FPOs by FIs*
4. *Convergence with Departments for various services through FPOs (MSP, MNREGA, Watershed)*
5. *Exemption to FPOs from taxes (VAT, IT, APMC)*

Thank You

District Pilot Sites

Primary Site Selection

Chittoor District AP-Primary Sector Team

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Selection criteria

- Representativeness in terms of soils, landscape, rainfall, crops, and socio-economic conditions
- Accessibility
- Willingness to adopt
- Presence of suitable institutions
- Potential for impact

Process

➢Stakeholders' consultations
- District collector
- CPO
- JD of all line departments
- Mandal level staff of all line departments
- Farmers

➢Consultation with all line Departments

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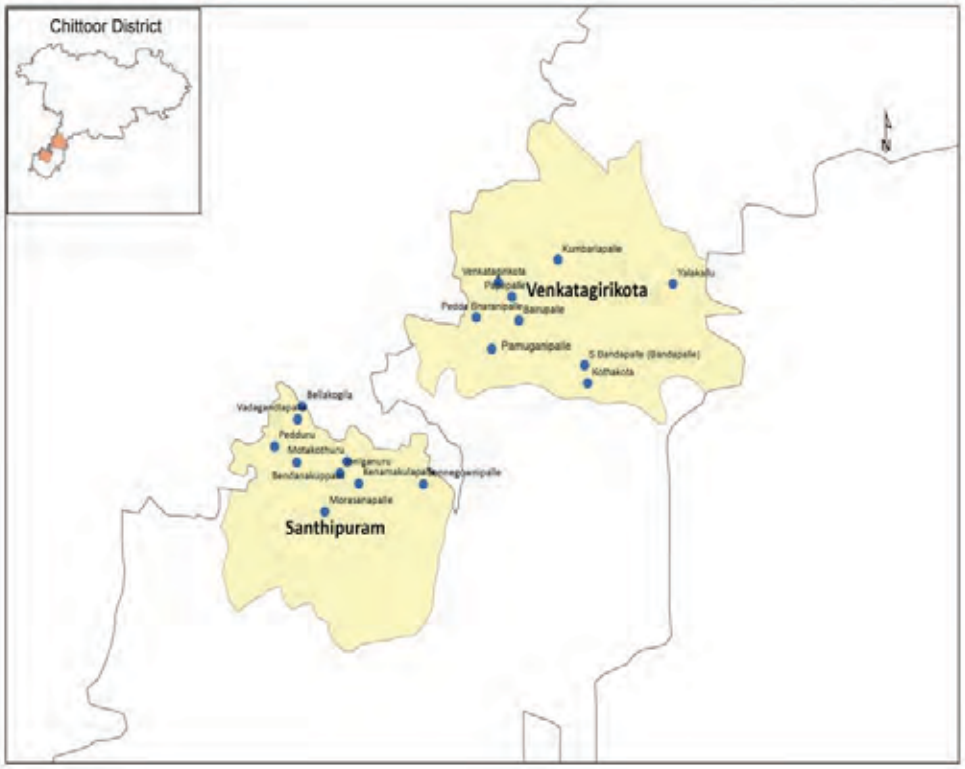
Selected Pilot Sites



Site Selection Villages

Mandal	Santipuram	Venkatagirikota
Watershed	-	Penuganipalle
Villages	Kenamakulapalle, Sonniganepalle, Bendamakuppam, Pedduru, Morasapalle, Morasannepalle, Joniganuru Motakohuru Vadagandlapalle Bellakogilla.	Bairupalli, Kothakota, Kumbarlapalle, Pamuganipalle, Papepalle, Peddabarinenipalle Yalakallu, S.Bandapalle, Venkatagirikota.
Area	6114 ha	4765 ha
Soil type	Red soil	Red soil

Identified division wise mandals tentatively for converging different activities in the targeted area of 10,000 ha

S.NO	DEPARTMENT CONCERNED	PALAMANERU DIVISION	MADANAPALLI DIVISION	TOATAL AREA (ha)
		SHANTIPURAM (ha)	V.KOTA (ha)	
1	AGRICULTURE CROPPED AREA	3670	4271	7941
2	**ANIMAL HUSBANDERY BASIC DATA**			
	A.CATTLE AND BUFFALOUS	23,064	23070	45,479
	B.SHEEP AND GOAT	27,042	24,761	51,803
	C.POULTRY	2,82,701	1,44,413	4,27,114
3	D.W.M.A WATER SHED PROGRAME	NIL	4,271	
4	HORTICULTUR	431	1,429	1,860
5	MARKETING	AMC,KUPPAM	AMC,PALAMANERU	
6	SERICULTURE	1,573	850	2,423
	TOTAL	**5,674**	**6,550**	**12,224**

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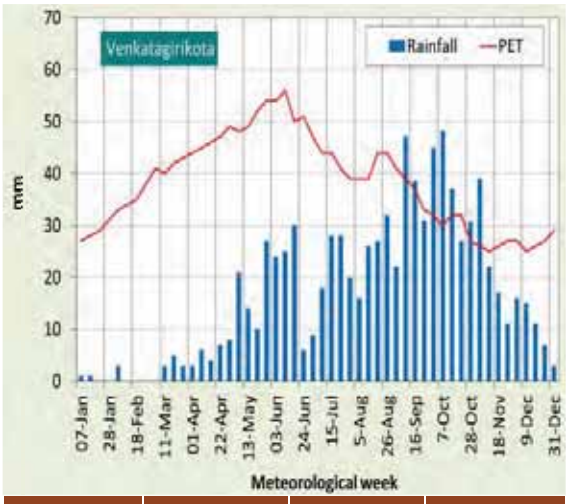
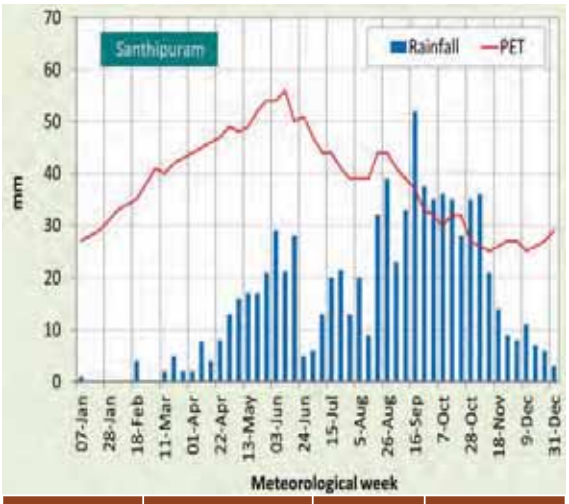
V.Kota and Santipuram mandal Rainfall data



Element	Kharif	Rabi	Annual
PET (mm)	841	493	1988
Rainfall (mm)	591	146	872



Element	Kharif	Rabi	Annual
PET (mm)	841	493	1988
Rainfall (mm)	542	120	806

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Constraints Identified Across villages Based on Stakeholders Consultations

Agriculture

- Micro nutrient deficit in soils
- Lack of high yielding crop varieties
- Labour shortage
- Lack of mechanisation
- Fluctuations in market prices

Horticulture

- Considerable area under vegetable cultivation
- Lack of knowledge of improved management practices for vegetable cultivation
- Lack of improved vegetable crop varieties
- Needs regular capacity building program

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Major interventions

- Soil test-based nutrient management
- Improved cultivars
- Integrated pest management
- Organic matter building measures
- Landform management for in-situ moisture conservation and water management (including MI & scheduling)
- Expansion of horticulture crops
- Expansion of poly houses
- Fodder promotion
- Shifting to high value agriculture

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Thank you!

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Primary site selection in East Godavari District

East Godavari Primary Sector Team

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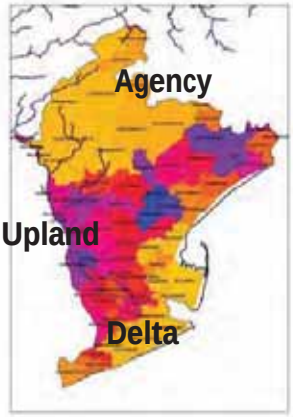
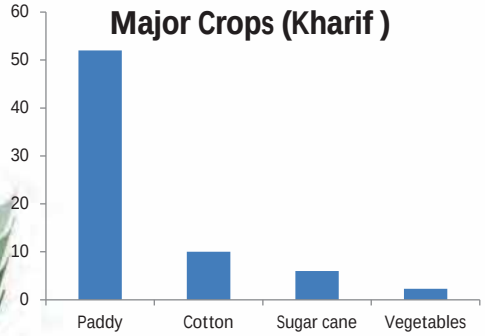
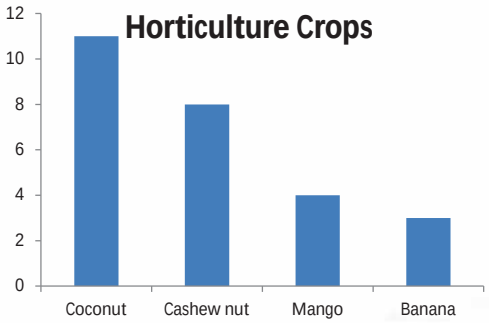
District Profile

- *District Profile (10818 km2)*
- *Agency, (3000 km2): Rainfed 80%*
- *Upland (Approx. 4000 km2); 50-50 RF and Irrigated*
- *Delta (Approx. 3500km2); Irrigated 80%*
- *Rainfall 1200 mm*







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Discussions made

District Collector; CPO; Sub Collector – ITDA; JDA – Agriculture; PD-ATMA; PD-DWMA; JDA-Animal husbandry; JDA- Horticulture; DD-Fisheries; PHO-ITDA; PAO-ITDA; ADA-Addateegala; ADA-Yeleswaram; AO-Addateegala; AO-Yeleswaram; HO-Addateegala, etc.

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Process

1. **Met District Collector and CPO : discussed about pilot site selections**
2. **As suggested by DC we met all districts heads of Primary sectors as shown in pics**
3. **Visited Mandal offices and collected village level data and analysed and also checked the criteria list for selection**
4. **Contacted back all heads of primary sectors for zeroing the mandals (Addateegala and Yeleswaram mandals)**
5. **Then meet DC and CPO for finalising the proposed mandals and to get approval from DC**
6. **Memo has been sent to all aligned departments for sharing their 2015-16 working plans in proposed mandals**

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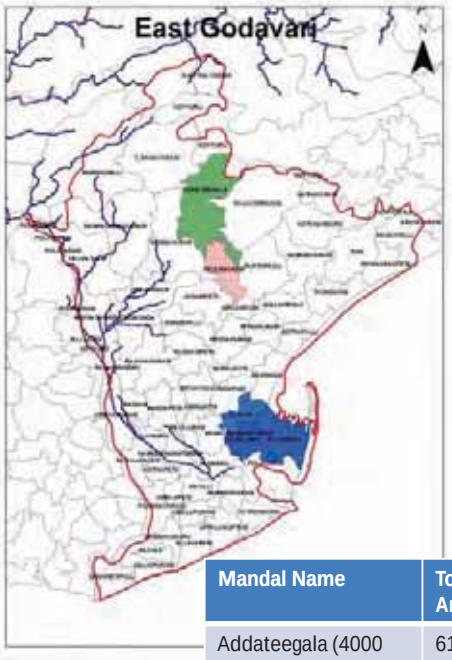
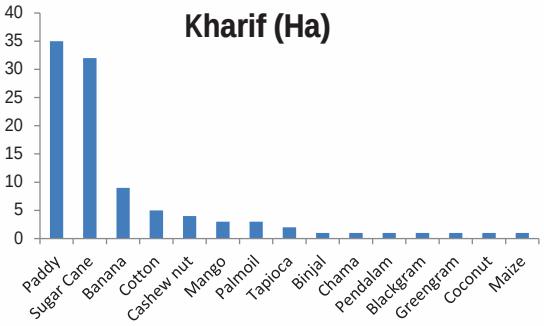
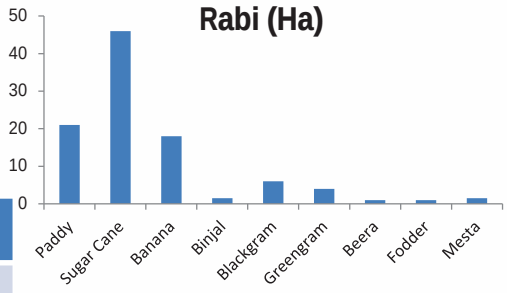
Pilot Site Details – East Godavari







Mandal Name	Total Geo. Area in Ha	Cultivable Area in Ha
Addateegala (4000 Ha)	61000 Ha	5210 Ha
Yeleswaram (4000 Ha)	11000 Ha	6970 Ha
Fisheries (2000 Ha)	*Tallarevu, Karapa and Kazuluru*	

Thank You

Major interventions in the district

uctivity and

l like to take

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JDA Agriculture

PD DWMA

FDO Fisheries

Major interventions in the district

For increasing the productivity and orduction

New Innovation u would like to take

Constraints

1. **Awareness in Distrct level officers**
2. **Not cooperative from Collector and CPO**

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Primary sector – site selection, characterization and proposed plans: Kadapa district

(Primary Sector Kadapa Team/Team Building and Planning Workshop, ICRISAT, Patancheru, Telangana state, India/25 March 2015)

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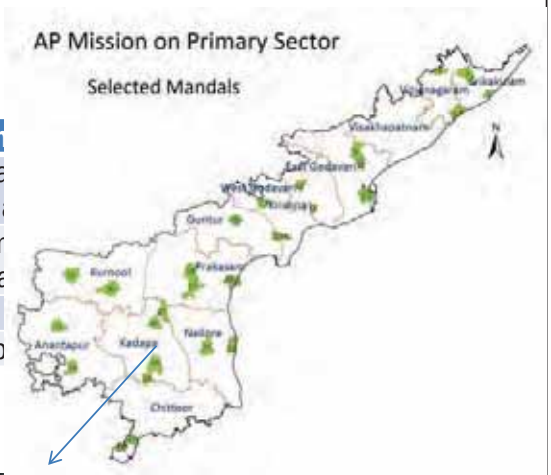
Pilot sites - Kadapa

Mandal	Village(s)nam
Poromamilla	Siddavaram, Ganugapenta Challagigella, Venkataram
Brahmamgarimatham	Godlaveedu, Gundapuram Dirasavancha, Nagisettypa
Veerapalli	Veerapalli, Matli
Sambepalli	Settipalli, Devpatla, Gutap



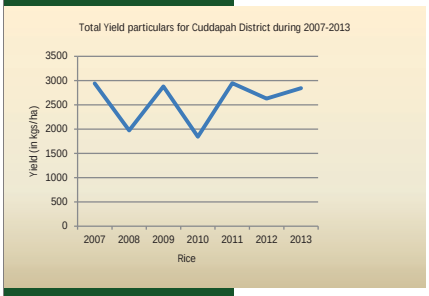
- 2012-13 watershed program being implemented in Poromamilla & Brahmamgarimatham
- 2009-10 watershed program implemented in Veerapalli and Sambepalli, respectively; 2014-15 watersheds programs in some hamlets.
- Represent important crops – paddy, groundnut, cotton
- Potential for development in horticulture and vegetables
- Represent typical regions in the district – rainfed, irrigated thru borewell and irrigated thru canal.
- Different rainfall scenarios – 750 mm in Brahmamgarimatham; 820 mm in Poromamilla; 640 mm in Veerapalli and 670 mm in Sambepalli

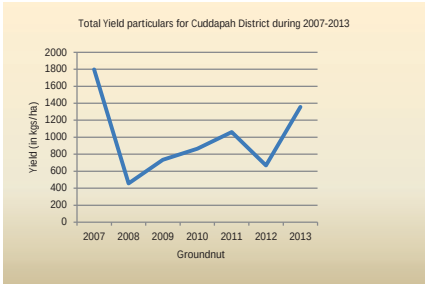
Pilot sites Identification - Process

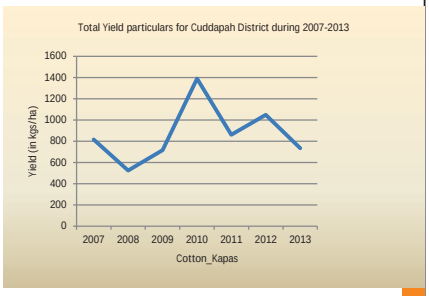
- Consultations with district officials on 11th March 2015–
  - [CPO; JD Agriculture; JD Animal Husbandry; PD-Micro-Irrrigation
  - AD Horticulture; Addl PD-DWMA; AD-Fisheries]
- Visit to pilot sites along with line staff and interactions with line staff and farmers
- Assessment for fitting in selection criteria –
  - Representativeness of major systems in the district
  - Watershed boundaries
  - Willingness of farmers /stakeholders to participate
  - Potential for impact

Low hanging fruits - stagnant or declining yields of crops

District	Year	Crop Name	AREA (ha)			YIELD (kg/ha)			PRODUCTION (Tones)			State Productivity (kg/ha)		
			Kharif	Rabi	Total	Kharif	Rabi	Total	Kharif	Rabi	Total			
Cuddapah	2013	Rice	51753	10959	62712	2876	2687	2843	148842	29447	178289	3073	4017	3374
Cuddapah	2013	Groundnut	42251	17263	59514	1025	2165	1356	43307	37374	80681	413	2667	601
Cuddapah	2013	Cotton_Kapas	34119	1803	35922	734	734	734	25043	1323	26366			
Bengalgram	2013	Bengalgram		97046	97046		1275	1275		123734	123734			







Constraints

1. Declining soil fertility and mismanagement of fertilizers
2. Lack of moisture conservation and proper water management
3. Lack of mechanization to facilitate timely sowing and operations
4. Low yielding cultivars

Livestock – a potential sector

Mandal	Cattle	Buffaloes	Sheep	Goat	Pigs	Backyard Poultry
Brahmamgarimattam	418	11648	42010	7527	0	16847
Porumamilla	1285	19724	34838	10625	187	29455
Sambepalle	10703	2511	98335	10794	47	34865
Veeraballe	4336	5523	33735	12537	175	47585
DISTRICT TOTAL	**138132**	**457504**	**1399755**	**453971**	**8954**	**1153290**

Item	Production
Milk (000 Mt)	280.5
Meat (000 Mt)	16.50
Eggs (Lakh no.)	1127

Constraints

- Lack of adequate and nutritious fodder
- Improper feeding schedule
- Low yielding breeds
- Health issues with animals (e.g. lack of deworming)
- Lack of proper markets

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Other opportunities

- **Cultivating current fallows (1.29 lakh ha) in the district) – using seed priming and proper water management practices**

Other crops in the district

District_	Total Area Cropped (ha)	Crop	Area (ha)	Crop	Area (ha)	Crop	Area (ha)	Crop	Area (ha)	Crop	Area (ha)
Cuddapah	240102	**Mangoes**	20675	Plantains (For Harvest)	8438	Redgram	8085	Jowar	5503	Cowgram	1157
						Batavia	7587	**Turmeric**	4036	Sunflower	1139
								Bajra	2833	Maize	1125
								Tomatoes	2638	Castor	1093
								Onions	2497	Horsegram	880
								Acid Lime	1725	**Chillies**	679
								Papaya	1273	Betel Leaves	650
										Green Chillies	608
										Chrysanthamum	584
										Sugarcane Cane	550
										Sugarcane Gur	550

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Major interventions (2015-16)

S. No.	Technology	Target area (%)	Expected increase in output with targeted farmers (%)
1	Soil test-based nutrient management	40	10
2	Landform management for in-situ moisture conservation and water management (including MI & scheduling)	10	10
3	Pest and disease management	20	10
4	Improved cultivars	10	15
5	Organic matter building measures	5	-
6	Mechanisation for timely operations	5	5
7	Crop intensification (using seed priming and water management) in rabi and kharif fallows	10	100
8	Fodder promotion (along with concentrates and deworming of animals)	1	25
9	Shifting to high value agriculture	1	50

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International Crops Research Institute for the Semi-Arid Tropics

Swarnandhra Vision
A Mission on Primary Sector

Guntur District Team

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Guntur District Profile

Major Soils	area ('000 ha)	% of total
Black Cotton Soils	491	72
Red Soils	116	17
Coastal Sandy Soils	61	9
Alluvial Soils	14	2

Rainfall	Rainfall (mm)
SW monsoon (June-Sep)	545
NE monsoon (Oct-Dec)	251
Winter (Jan-Feb)	14
Summer (March-May)	71
Annual	881

Guntur District Area Under Different Crops (%)

Gross cropped area (ha) : 866499			
Crop	Cropped Area (Ha)	% of Crop	Yield
			kg ha^{-1}
Rice	329465	38	3483
Maize	80352	9.3	8021
Cotton	170158	19.6	1083
Chillies	64129	3.0	5000
Groundnut	4746	0.5	1969
Vegetables	14354	1.7	
Fresh Fruits	12936	1.5	
Total	676140		

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Process Adopted for Sites Selection and Benchmark Characterization in Guntur

Criteria adopted

- Representative site for the district
- Good potential for impact to bridge the gaps
- Accessibility
- Willingness to adopt new
- Presence of suitable institutions
- Predisposition for change

Process

- Stakeholders' consultations
  - District collector
  - CPO
  - JD of all line departments
  - Mandal level staff of all line departments
  - Farmers
- Consultation with all line Departments

Guntur District Pilot site area selection

- **CPO conducted meeting on 11th March with all concerned primary sector officials.**
- **In the meeting identified three mandals for different activities.**

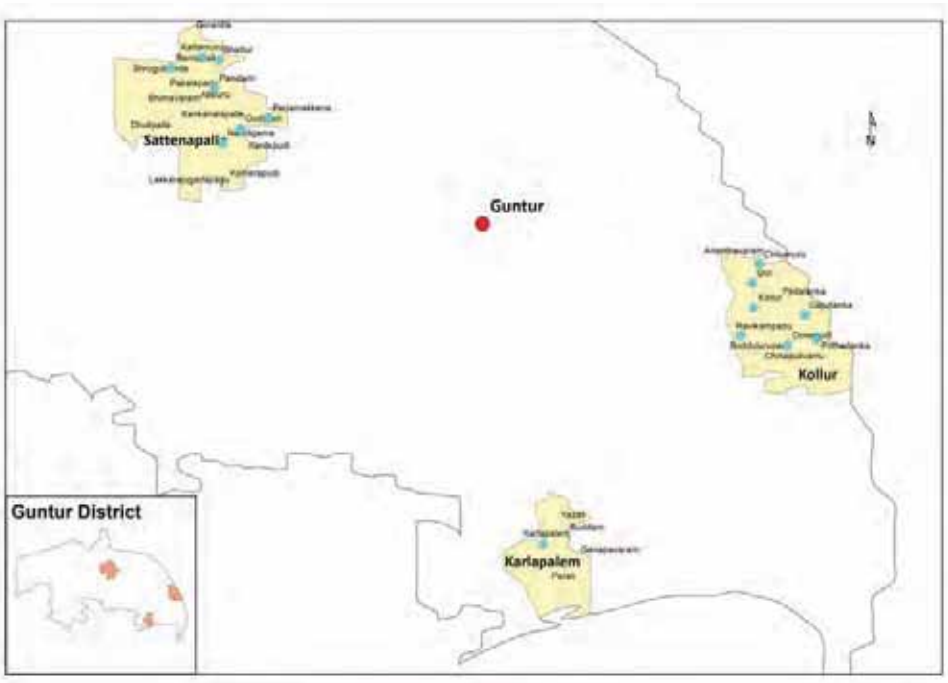

District Level Officers Meeting

Mandal wise crops covered

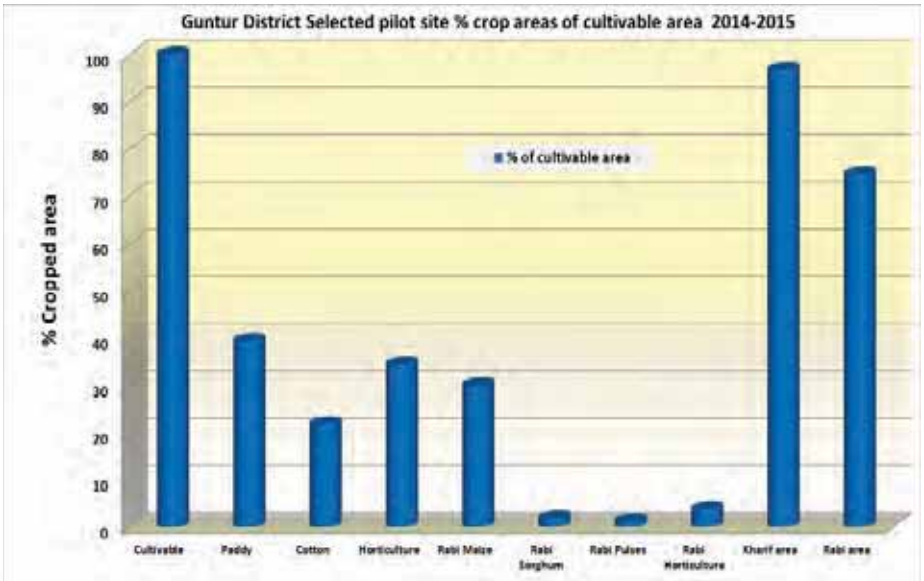
S.No	Mandal Name	No.of Villages Covered	Crops Covered
1	Kolluru	9	Paddy, Maize, Horticulture & Sericulture
2	Sattenapally	8	Cotton, Chillies & Fish farming
3	Karlapalem	2	Shrimp farming (Fisheries)
4	Thulur	1	Cage farming (Fisheries)


Mandal Level Officers Meeting

Selected villages for Guntur district pilot site



Guntur District Pilot site area Profile



Guntur District Pilot site area Profile

Livestock	Sattenapally Mandal					
S.No	Village	Cattle	Buffalo	Sheep	Goat	Milk Production litres/year
1	Nandigama	163	1393	1224	159	1203552
2	Gudipudi	48	1648	492	0	1423872
3	Panidem	124	1079	964	60	932256
4	Pedamakkena	192	634	684	70	503200
5	Bhatluru	51	530	363	138	401000
6	Kattamuru	74	956	500	0	800000
7	Rentapalla	186	735	548	164	600000
	Total	838	6975	4775	591	5863880

Livestock	Kollur Mandal					
S.No	Village	Cattle	Buffalo	Sheep	Goat	Milk Production litres/year
1	Kolluru	83	2229	938	151	1604880
2	Ravikampadu	3	394	0	23	282960
3	Ipuru	80	869	68	0	625680
4	Chilumuru	31	349	0	0	251280
5	Donepudi	18	680	147	23	489600
6	Gajullanka	6	567	132	10	406800
	Total	221	5088	1285	207	3661200

- On 12th evening met the collector and got the approval for the selected villages.

Rc.No.25/2015/CPO,Dt. .03.2015

Planning wing
Guntur

Note Submitted to the District Collector

Sub:- Andhra Pradesh Primary Sector Mission – Guntur District - Providing Assistance to District Scientific Co-ordinators for the Pilot site by the District Level Administration – Proposals Submitted for selection of blocks – Request –Reg.

Ref:-1. Letter No.APC/01/Agril/2015, Dt.02.03.2015 of the Agricultural Production Commissioner(APC) and Special Chief Secretary , Govt. of A.P., Hyderabad.
2. Lr.Rc.No.Spcila.I/Dy.S.G.6/2015/CPO, Dt.03-03-2015.

- - X - -

Kindly perusal is invited to the references cited.

It is submitted that Primary Sector Mission must be implemented in 10,000 Hectares of cropped area in the District with convergence of Agriculture and allied departments so as to get considerable results in the coming years.

It also submitted that as per the reference 1st cited, a meeting was conducted by Sri G.Pardhasardhi, Scientist and Guntur District Co-ordinator from ICRISAT, on 11.03.2015 at 11.00 A.M. in the Office of Joint Director & Chief Planning Officer, Guntur with all the related District Officers i.e. Joint Director, Agriculture, Joint Director Animal Husbandry, Chief Planning Officer, Deputy Director, Fisheries, Deputy Director, Horticulture and A.D. Sericulture for selection and identification of pilot sites in the District to carry out the field work in the selected pilot sites for Improvement of Primary Sector Miss on in the District. In this meeting all the Officers have selected 4 Mandals namely: Sattenapalli, Kolluru, Karlapalem and Thullury by covering 10,000 Hectors as per the instructions of the District Coordinator so as to request the District Collector to take up the field work and to give necessary instructions to the Mandal Level Officers. The details are furnished as below.

Sl. No.	Mandal Name	No.of villages covered	Crops covered
1	Kolluru	9	Paddy, Maize, Horticulture & Sericulture
2	Sattenapalli	8	Cotton,Chilies & Fish farming
3	Karlapalem	2	Shrimp farming (Fisheries)
4	Thullury	1	Cage farming (Fisheries)

The detailed activities to be taken up under the above project appended herewith.

In this regard if the District Collector Please, the above 4 Mandals may be acceptec which are selected by the district Officers duly conducting field visits for implementation of Primary Sector Missions.

COLLECTOR
GUNTUR

Interactions with Farmers

Constraints Identified Across villages Based on Stakeholders Consultations

Agriculture

- Soil deficient in micro nutrients
- Lack of high yielding crop varieties
- Labour shortage
- Lack of mechanisation
- Fluctuations in market prices

Horticulture

- Considerable area under vegetable cultivation
- Lack of knowledge of improved management practices for vegetable cultivation
- Lack of improved vegetable crop varieties
- Needs regular capacity building program
- Banana prone to diseases particularly panama disease
- Banana susceptible to lodging due to more plant height
- Required tissue culture seedlings in Banana

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12

Kurnool District

District coordinator: Prabhakar Pathak

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Major selection criteria for pilot site

- Representativeness in terms of soils, landscape, rainfall, crops, and socio-economic conditions
- Accessibility
- Willingness to adopt
- Presence of suitable institutions
- Potential for impact

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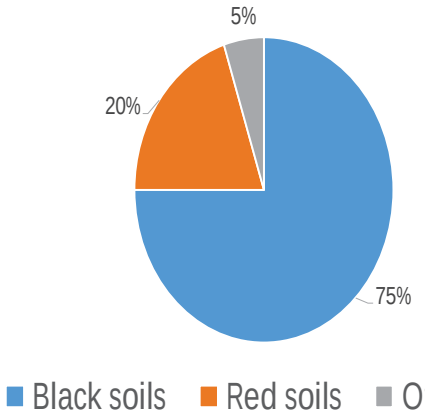
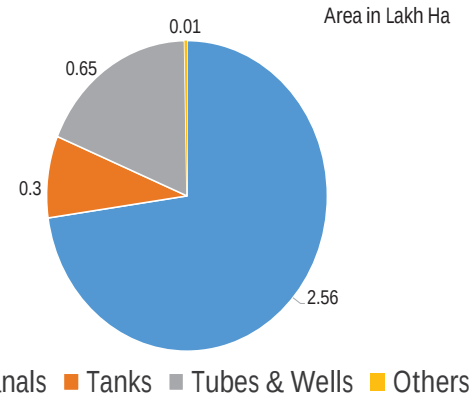
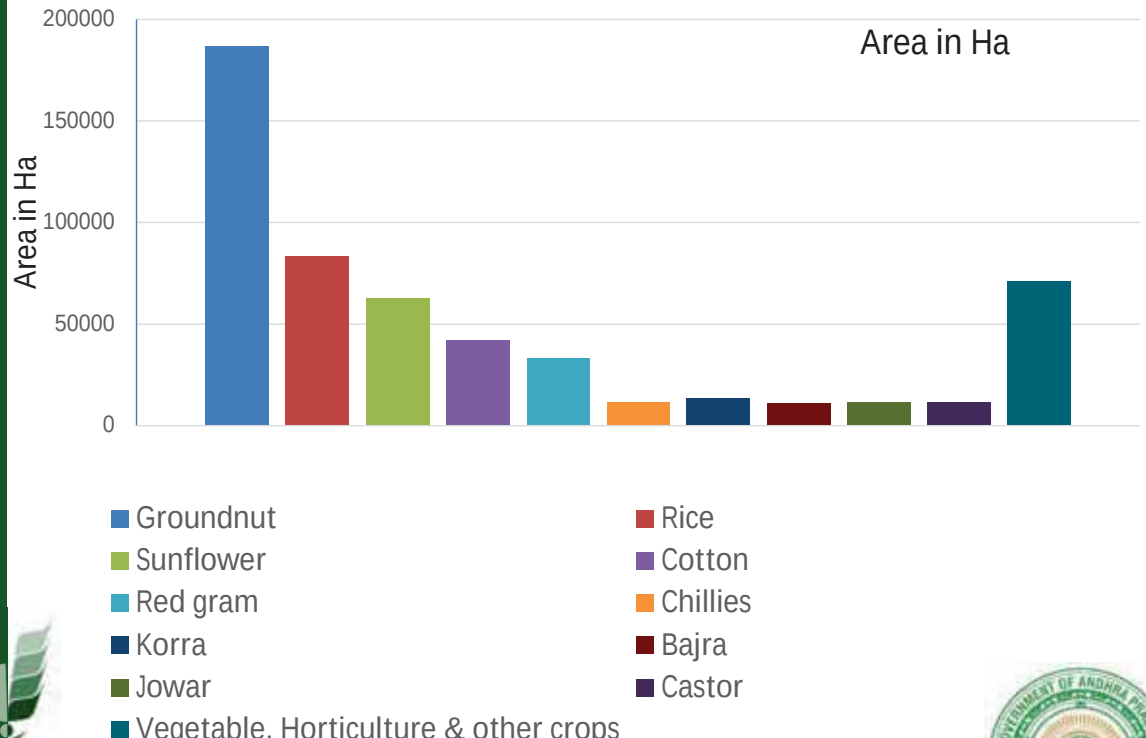


Major soils in Kurnool

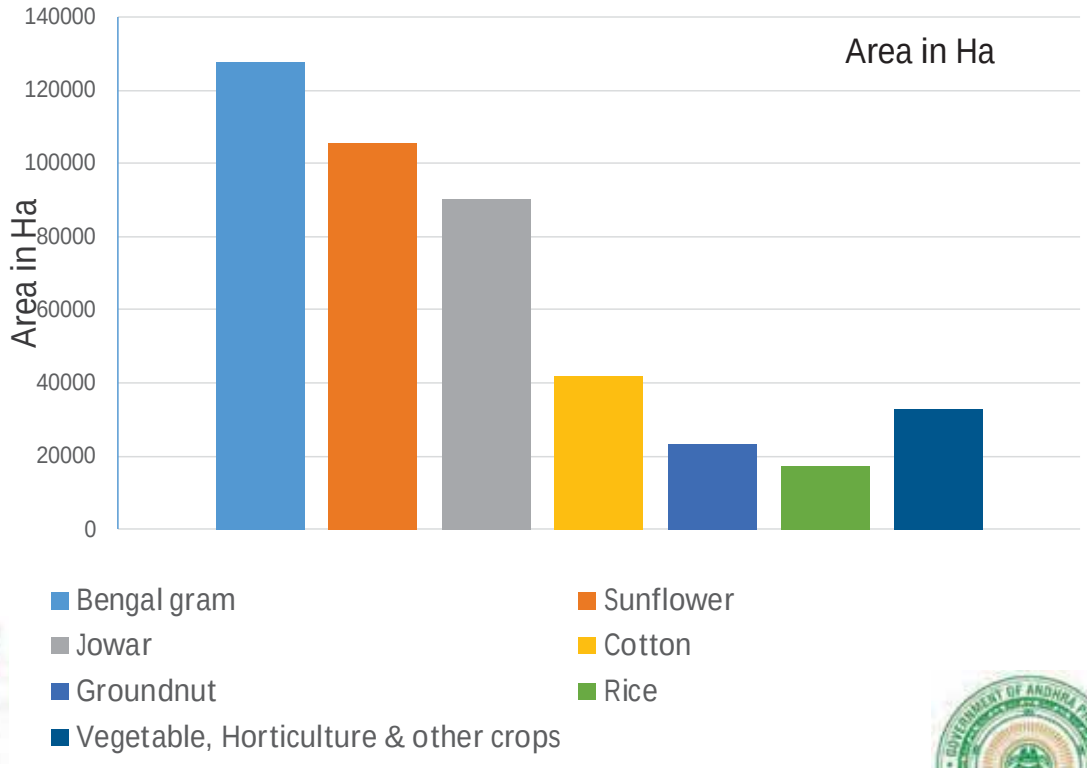


Major source for Irrigation in Kurnool

Major crops grown in the Kurnool district during kharif season



Major crops grown in the Kurnool district during rabi season



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Consultation with line departments and other stakeholders

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Field visit to Banaganapalli watershed with line department officials

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Field visit to Devanakonda watershed line department officials

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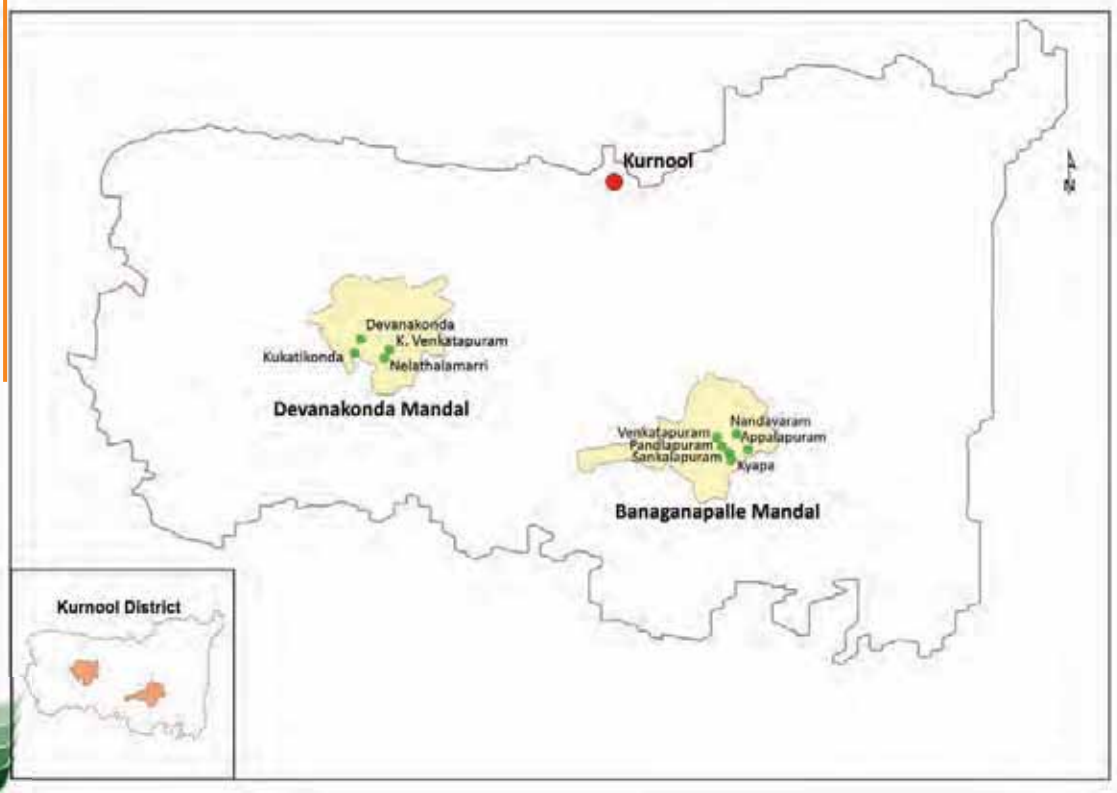
Site Selection

	Site 1	Site 2
Mandal	Banaganapalli	Devanakonda
Watershed	Banaganaapplli	Nallachelimila
Villages	Venkatapuram, Nandavaram, Appalapuram, Pandlapuram, kypa, Sankalapuram	Devanakonda, K.Venakatapuram, Nelathalamarri, Kukatikonda
Area	5500 ha	4500 ha
Soil type	Black soil	Red soil

Map of pilot sites

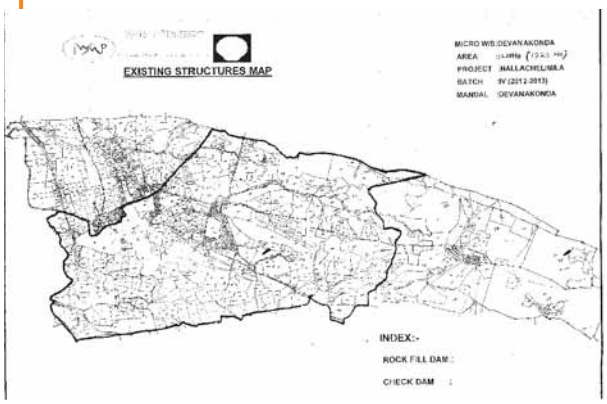


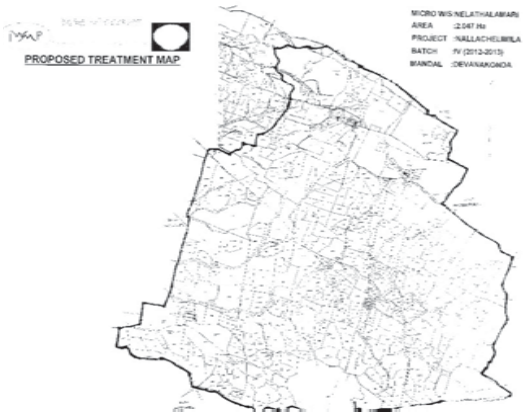
Maps of Banaganapalli watershed Villages (pilot site)

Banaganapalli
Latitude 15°19´02.44´´
longitude 78° 13´ 32.95´´

Appalapuram
Latitude 15° 20´ 03.27´´
Longitude 78° 15´ 30.82´´

Maps of Devanakonda watershed villages (pilot site)

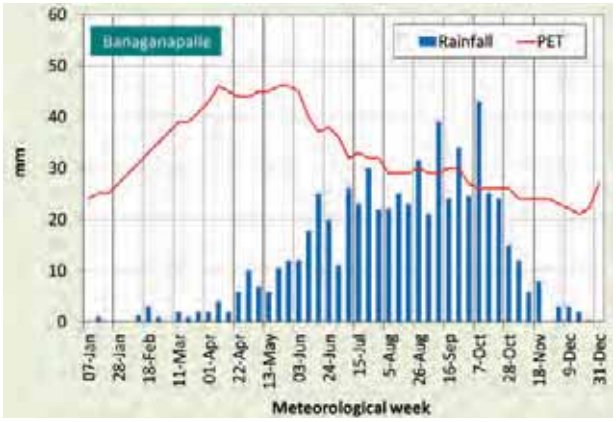


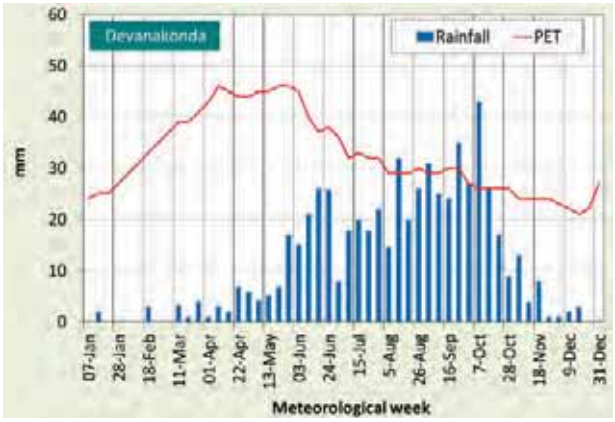


Devanakonda
Latitude 15°32´15.03´´
longitude 78° 33´ 40.69´´

Nalathalamari
Latitude 15° 29´ 44.91´´
Longitude 78° 36´ 07.63´´

Rainfall and potential evapotranspiration at selected benchmark sites in Kurnool district





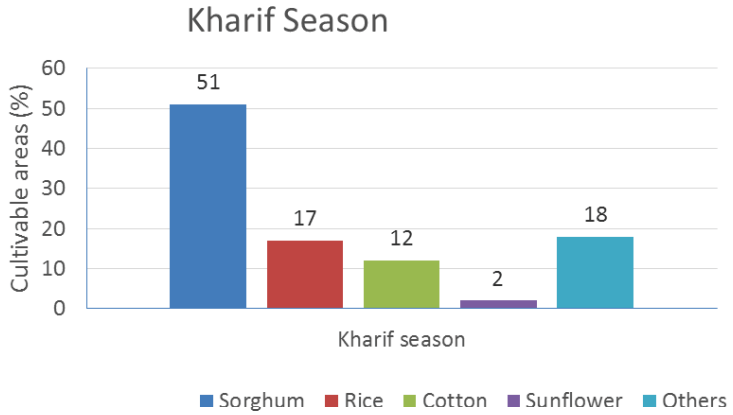
Element	Kharif	Rabi	Annual
PET (mm)	646	440	1691
Rainfall (mm)	526	40	643

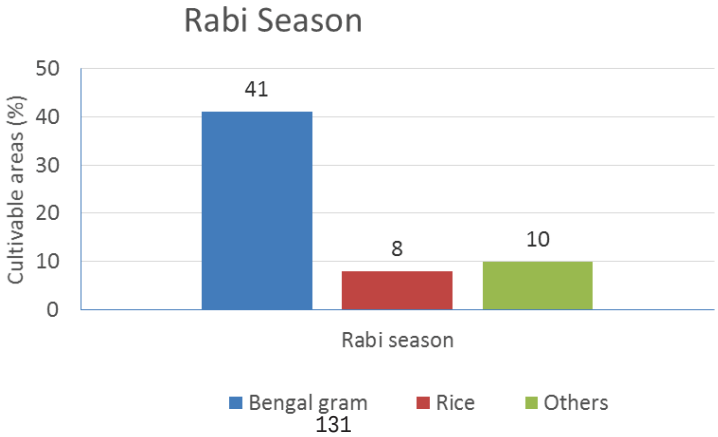
Banaganapalle mandal,

Element	Kharif	Rabi	Annual
PET (mm)	646	440	1691
Rainfall (mm)	489	37	601

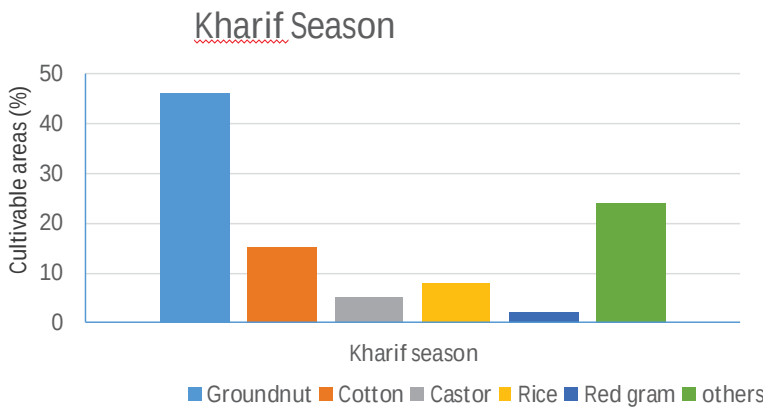
Devanakonda mandal

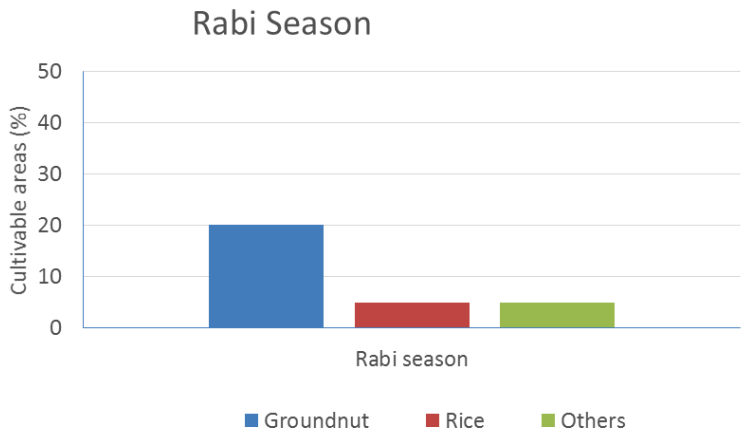
Major crops at Pilot site Banaganapalli





Major crops at Pilot site Devanakonda





- Major constraints
  - Low and erratic rainfall leading to drought
  - Deficient in major and micro nutrients
  - Low organic matter
  - Low yielding crop varieties
  - Saline soils
  - Poor groundwater quality
- Key interventions
  - Application of micro nutrients
  - Use of improved crop varieties
  - Broad Bed and Furrow system for in-situ moisture conservation and higher yield for Groundnut
  - Micro irrigation for improving water use efficiency
  - Cultivation of high value crops such as Onion, Banana, Papaya & others
  - Excellent scope to increase milk production

Thank you!

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Andhra Pradesh-Primary Sector Mission

(Transforming Agriculture in Andhra Pradesh)

Nellore District AP Primary Sector Team

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District Information

District Profile (13076 km2)

- Total Geographical area: 13.16 lakh ha
- *Rainfall 1095 mm*

Sl No	Total cropped area (kharif)	% in Cultivable Area – Kharif (105850 ha)	Total cropped area-Rabi (253698 ha)	% in Cultivable Area - Rabi
1	Paddy	30-40	Paddy	70-80
2	Acid Lime (Nimma)	10-15	Acid Lime (Nimma)	10-15
3	Groundnut Mangoes Sugarcane Cane	5-10	Tobacco Total, Tobacco Verginia, Blackgram Bengalgram	3-4
4	Cotton	4-5	Greengram, Groundnut	2-3
5	Blackgram	2-3	Sunflower, Maize Seasmum(Gingelly)	1-2
6	Fishery	Ranks I in India		

Process

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Process Adopted for Sites Selection and Benchmark Characterization in Nellore

Criteria adopted

- Representative site for the district
- Good potential for impact to bridge the gaps
- Accessibility
- Willingness to adopt new
- Presence of suitable institutions
- Predisposition for change

Process

- Stakeholders' consultations
  - District collector
  - CPO
  - JD of all line departments
  - Farmers
- Consultation with all line Departments
  - Mandal level staff of all line departments

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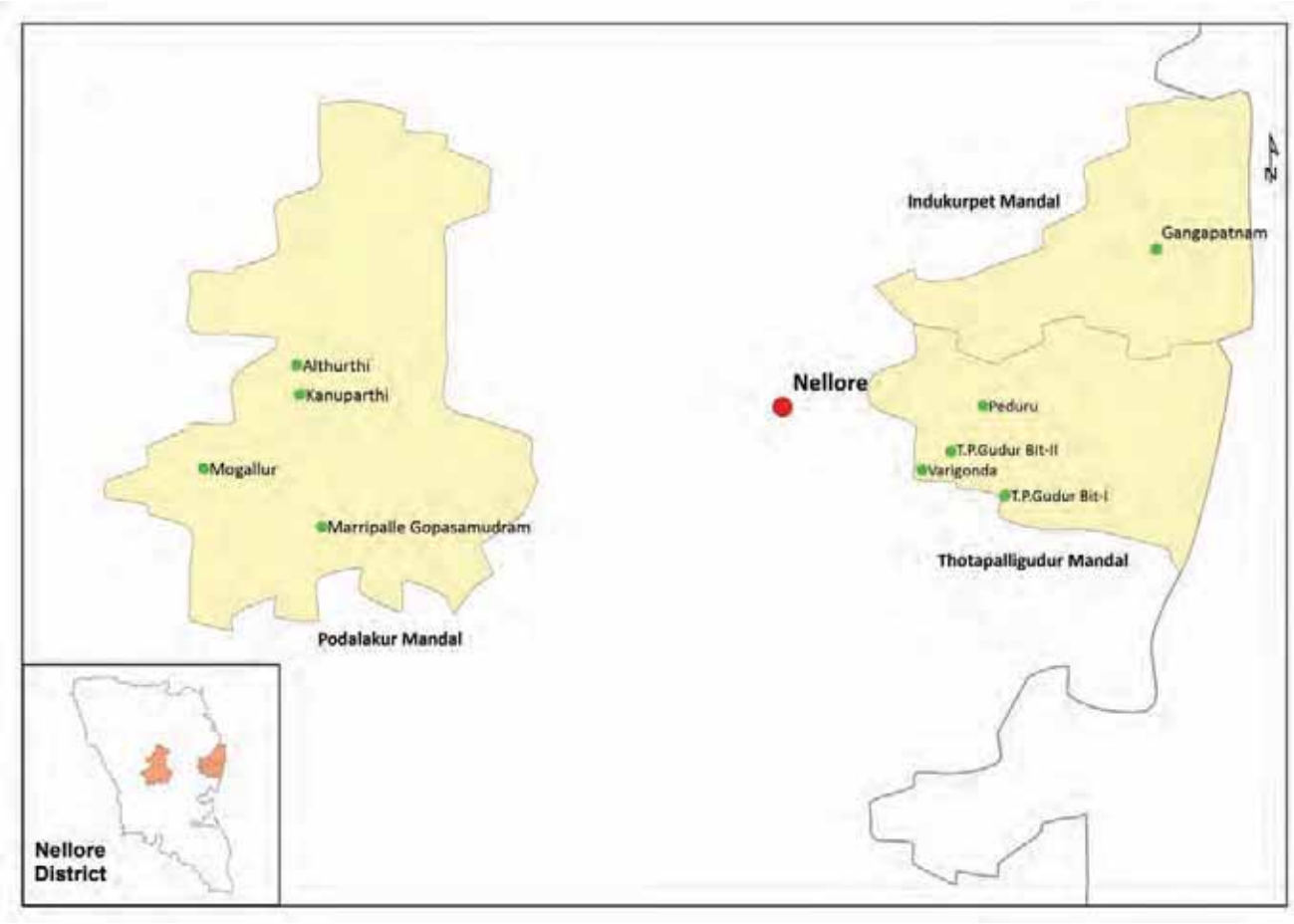
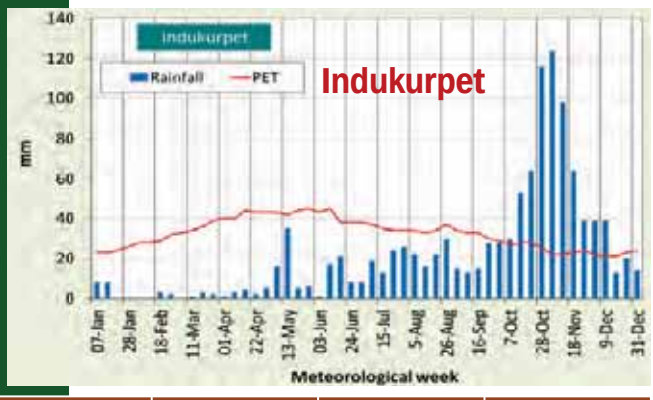
Graphical representation of Identified Pilot sites



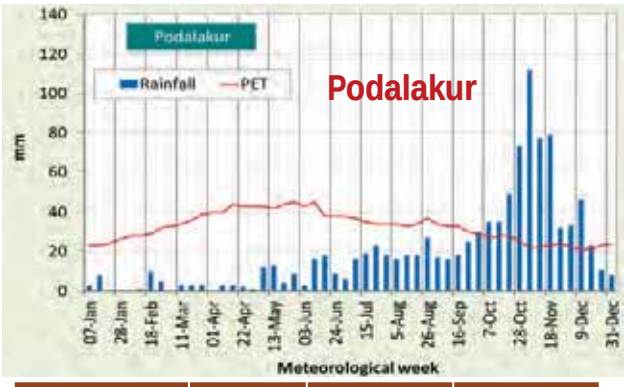
Pilot Sites Details

Sl No	Name of the Situation	Mandals covered	Village	Geograhpical Area in Hec.	Village Identified with Area (Hec.)					
					Cultivable Land	Net Area Sown			Horticulture	Fisheries
						Kharif	Rabi	Total		
1	Coastal situation (3000 Hec.)	Indukurpet	Lebur Bit-II (Jagadevipeta)	1333	1052	856	196	1052	519	48
			Gangapatnam	2347	961	455	170	625	118	231
2	ID Situation (4000 Hec.)	T.P.Gudur	Peduru	992	816	631	55	686	16	17
			Varigonda	1332	880	25	654	679	2	45
			T.P.Gudur I	879	510	11	437	448	0	2
			T.P.Gudur II (Papireddy Palem)	956	613	53	418	471	2	24
3	Dry Land (3000 Hec.)	Podalakur	Aldurthi	1461	1129	384	117	501	366	0
			Kanuparthi	1297	992	382	206	588	220	0
			Mogaluru	1145	593	258	219	477	244	0
			Marripalli (Gopasamudram)	405	308	82	44	126	87	0
Total				12147	7854	3137	2516	5653	1574	367

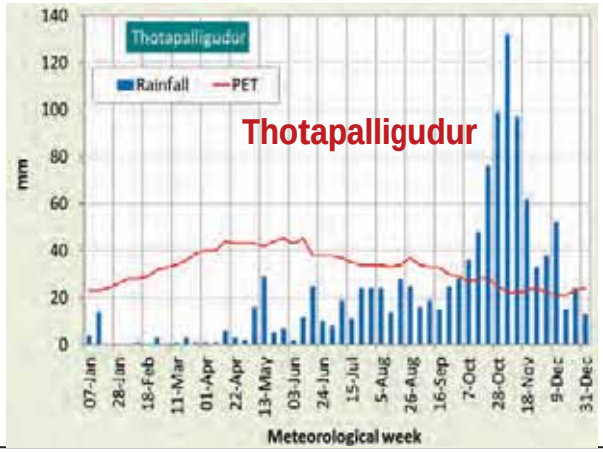
Nellore Sites - Rainfall Pattern



Element	Kharif	Rabi	Annual
PET (mm)	704	415	1688
Rainfall mm)	588	471	1143



Element	Kharif	Rabi	Annual
PET (mm)	704	415	1688
Rainfall mm)	502	448	1010



Element	Kharif	Rabi	Annual
PET (mm)	704	415	1688
Rainfall (mm)	586	488	1151

Field visit and group discussion for constraints identification and Benchmark Characterization

Gangapatnam

Jagadevipeta

Marripalli

Mogaluru

Proposed interventions in the district

Agriculture (20 % increase in productivity)

- Soil test based nutrient management to overcome nutrient deficiencies (particularly secondary & micro nutrients)
- Crop diversification & intensification with maize/ chickpea/pulses to break mono as well as single cropping system
- Enhancing seed replacement rate along with HY & resistant cultivars
- Mechanisation

B) Fisheries (20 % increase in productivity)

- Introduction of quality seeds free from diseases and pest particularly during early stage of growth
- Capacity building to reduce knowledge gaps
- Strengthening processing facility and value addition
  a. Godowns b. Cold storage facilities

Horticulture (10-15 % increase in productivity)

- Promoting improved vegetable/ fruits crop varieties
- Tissue culture banana
- Promoting improved management practices for vegetable/ fruit crops cultivation
- Balanced nutrient management

Thank you

Swarnandhra Vision

A Mission on Primary Sector

Prakasam District AP Primary Sector Team

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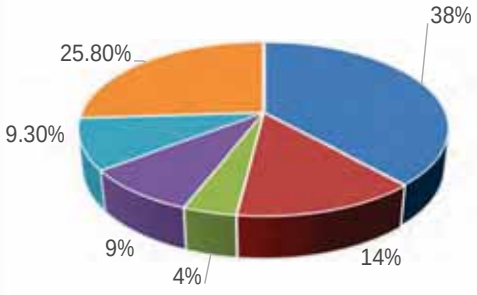
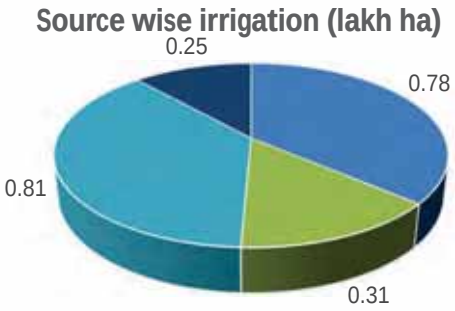
Land use pattern, source wise irrigation and soil types in Prakasam district

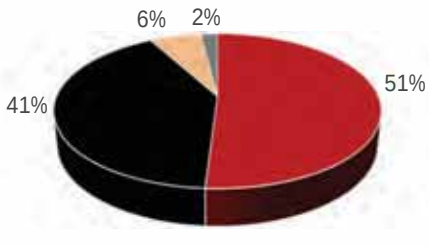
Land use



Source wise irrigation (lakh ha)

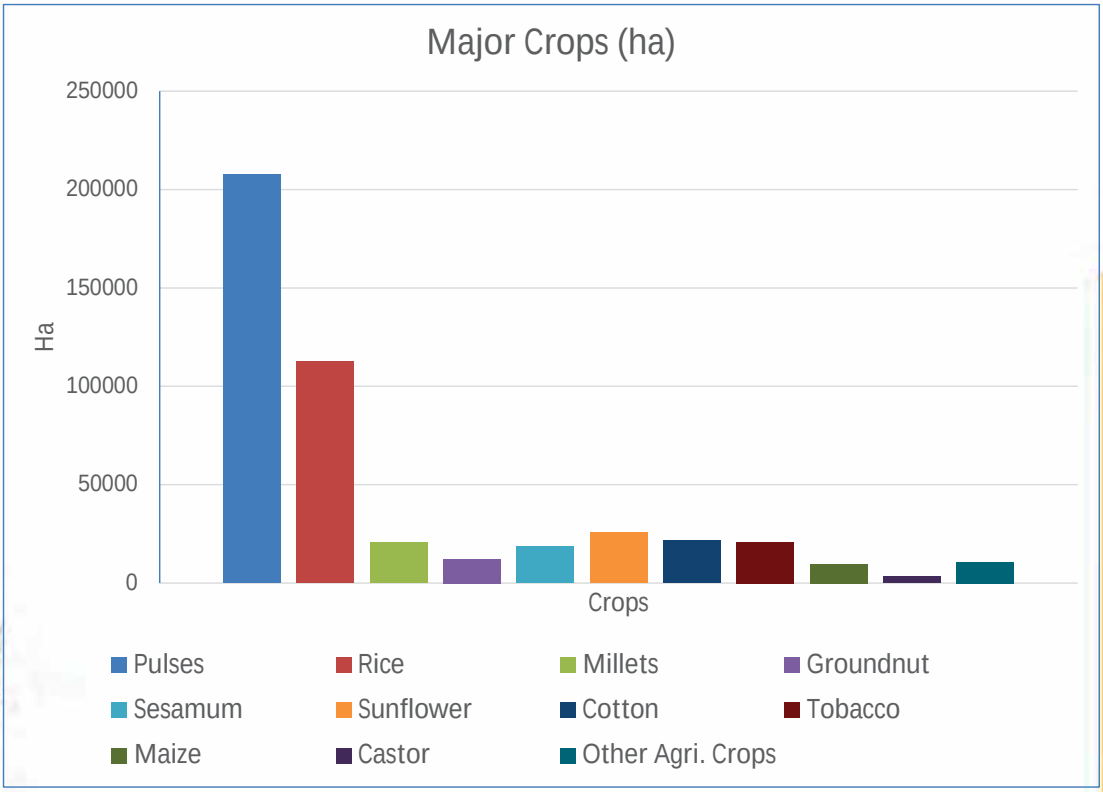


Soil types



Source: Prakasam CDAP

Area coverage under different crops (ha), Prakasam district



Source: Prakasam CDAP

Process Adopted for Sites Selection and Benchmark Characterization in Prakasam

Criteria adopted

- Representative site for the district
- Good potential for impact to bridge the gaps
- Accessibility
- Willingness to adopt new
- Presence of suitable institutions
- Predisposition for change

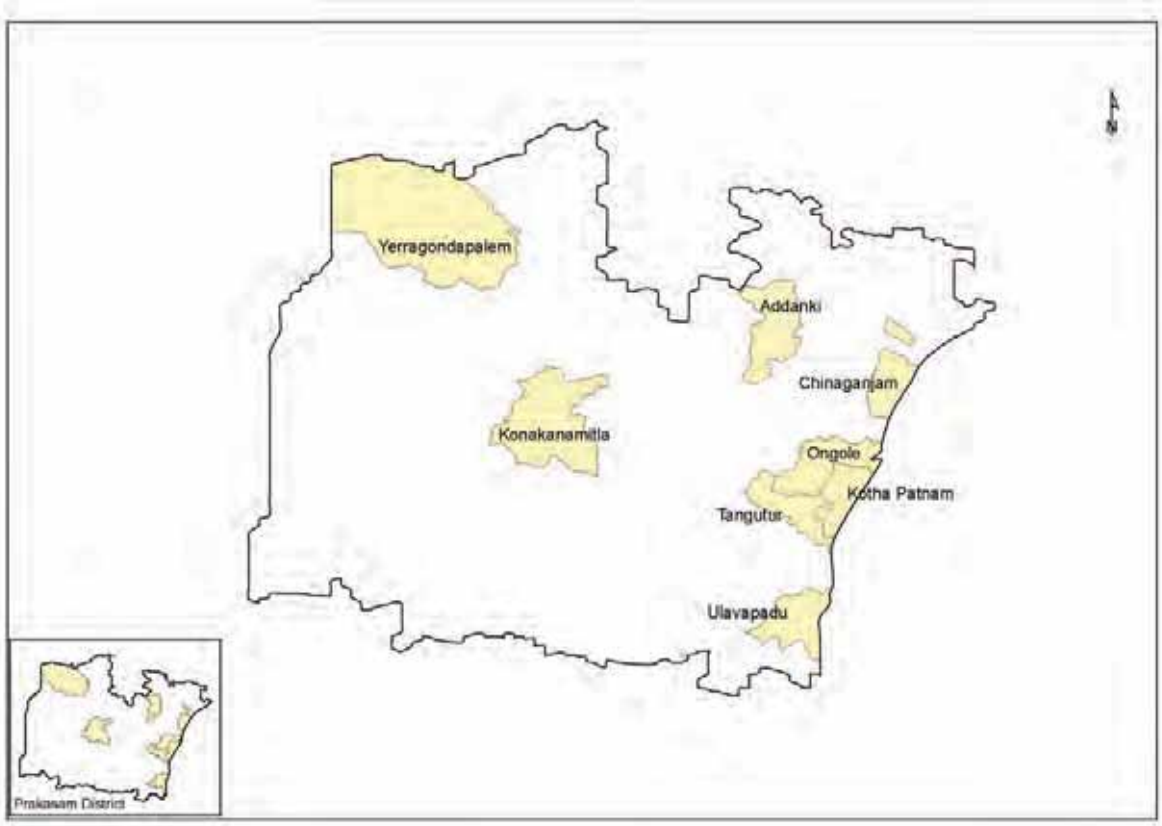
Process

- Stakeholders' consultations
  - District collector
  - CPO
  - JD of all line departments
  - Farmers
- Consultation with all line Departments
  - Mandal level staff of all line departments

Group discussion and field visit for identification pilot sites

Prakasam District Collector conducting meeting with all line department officers

Map of identified Pilot sites, Prakasam district



Identified Pilot sites

Sl. No.	Mandals	Area (ha)	Crops and area in ha	Focused Sector
1	Y. Palem	2000	Papaya (500), Banana (500), Chillies (1000),	Agriculture, Horticulture, Animal husbandry, sericulture, watershed
2	KK Mitla	4000	Cotton (3000), Pigeonpea (1000)	Agriculture, Horticulture, Animal husbandry, sericulture, watershed
3	Addanki	1000	Maize (1000)	Agriculture, Horticulture, Animal husbandry, sericulture, watershed
4	Kotapatnam	953	In land fisheries, Groundnut	Fishery
5	Ongole	525	In land fisheries, Groundnut	Fishery
6	Chinaganjam	1200	In land fisheries	Fishery
7	Tangutur	700	In land fisheries	Fishery
8	Ulavapadu	520	In land fisheries	Fishery
	Total	10900		

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Major constraints

- Erratic rainfall
- Water scarcity
- Low crop yields
- Poor soils
- Fodder scarcity (particularly green fodder)
- Low livestock productivity

Interventions

Based on the detailed survey location-specific appropriate interventions will be identified.

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9

AP Mission on Primary Sector

Pilot sites identification in Srikakulam District

Primary Sector Team

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Process Adopted for Sites Selection

Criteria adopted

- Representative sites for the district
- Good potential for impact to bridge the gaps
- Accessibility
- Willingness to adopt new technologies
- Presence of suitable institutions
- Predisposition for change

Process

- Consultations and discussions with
  - District Collector
  - Chief Planning Officer
  - Heads of all primary sector departments
  - Mandal level staff of all line departments
- Team identified the Mandals and Villages

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Discussions with Collector, CPO and Line Departments

Discussion with the district Collector

Discussions with department heads

Discussion with Tahsildar in Polaki

Interaction with farmer in DL Puram

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Major systems in the pilot villages

Mandal	No. of villages and area	Systems
Polaki	11 villages (4300 ha)	Prawns, Paddy, Cashew, Dairy and Meat
Ranasthalam	14 villages (4200 ha)	Maize, G.nut, Cotton, Coconut, Mango, Cashew, Banana, Dairy and Meat
Seethampet (Agency area)	32 villages (2000 ha)	Paddy, Cashew, Pineapple and Meat

- **In Polaki Mandal, 87% area is under Paddy cultivation**
- **In Ranasthalam, 66% area is under Horticulture**
- **In Seethampet, 49% area is under Paddy and 31% under Cashew**
- **Major crops -** Kharif : Paddy, Cotton, Maize, Groundnut
  Rabi: Green gram, Black gram, Maize
- **Horticultural crops:** Cashew, Mango, Coconut, Banana, Pineapple
- **Animal husbandry:** Buffalos, Poultry, Sheep, Goat
- **Fisheries:** Prawn cultivation and marine fish

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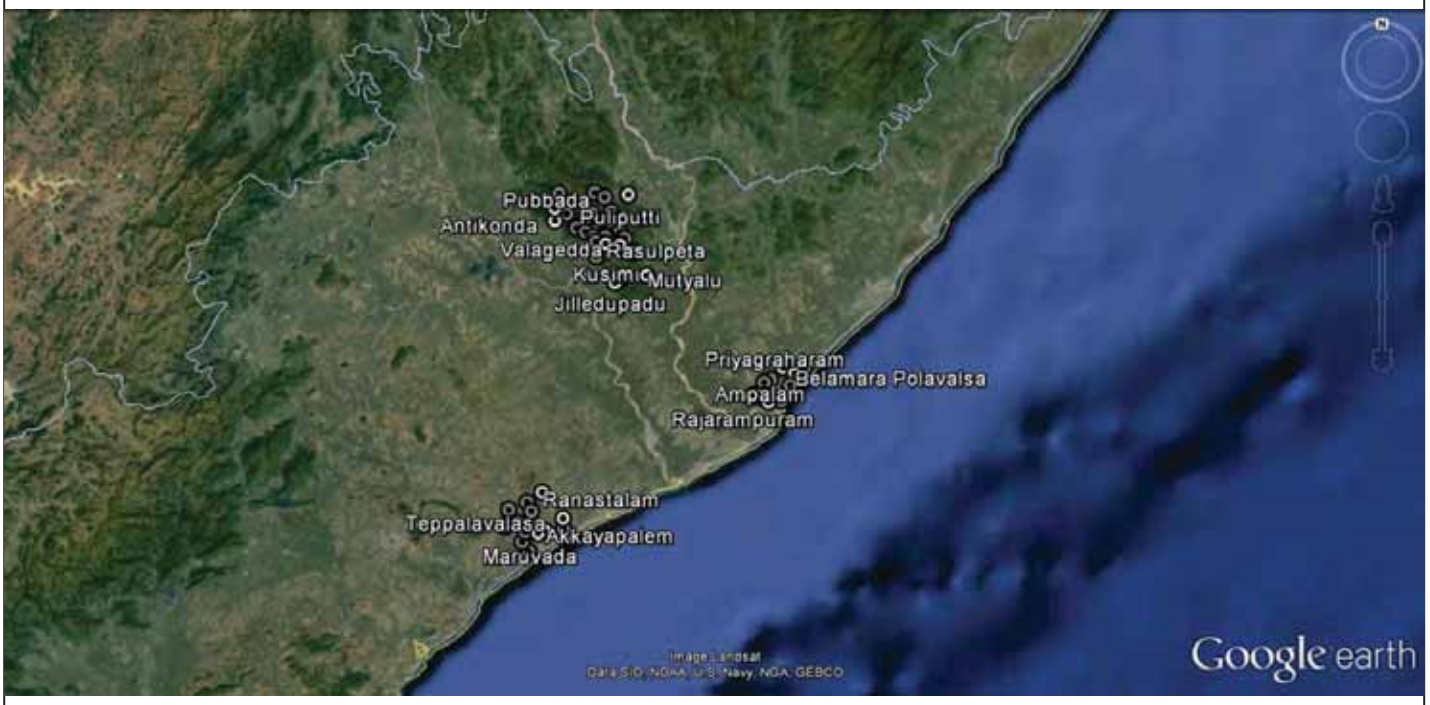
Location of pilot villages in Srikakulam



Constraints identified across villages

- Single-cropping system of paddy grown with coarse grain variety which is not consumed in the local market
- Low productivity of agricultural crops
- Low productivity of old horticulture plantations
- Low resource use efficiency (Paddy fallows during rabi)
- Lack of access to the markets
- Poor mechanization
- Local buffalo breeds giving low milk yield (2-3 lit/day)
- Subsistence vegetable cultivation
- Insufficient processing industries

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Major interventions in the villages

- Soil test based balanced fertilization
- Seed replacement of paddy with fine and super fine varieties
- Increasing cropping intensity by growing crops in rice fallows during rabi
- INM for increasing yields of horticulture plantations
- Biomass production like Bamboo and Neem in agency area
- Processing, value addition and linking farmers to markets
- Mechanization for reducing cost of cultivation
- Breed improvement of cattle
- Crop diversification with high value crops
- Modernization of cashew processing units as well as establishing new units

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AP Mission on Primary Sector

Pilot sites identification in Visakhapatnam District

Primary Sector Team

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Process Adopted for Sites Selection

Criteria adopted

- Representative sites for the district
- Good potential for impact to bridge the gaps
- Accessibility
- Willingness to adopt new technologies
- Presence of suitable institutions
- Predisposition for change

Process

- Consultations and discussions with
  - District collector
  - CPO
  - Heads of all primary sector departments
  - Mandal level staff of all line departments
- Team identified the Mandals and Villages

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Discussions with Collector, CPO and Line Departments

Discussion with the district Collector

Discussions with department heads

Major systems in the pilot villages

Mandal	No. of villages and area	Names of the villages
Padmanabham	6 villages (4000 ha)	Ayinada, Bapirajutallavalasa, Korada, Pandrangi, Venkatapuram, Revidi
Butchayyapeta	10 villages (4000 ha)	Gunnempudi, Kandipudi, Neelakantapuram, Rajam, Typuram, Chittiyyapalem, China Madina, Turakalapudi, R. Sivarampuram, R. Bheemavaram
Chintapalle (Agency area)	7 villages (2500 ha)	Vangasari, Lammasingi, Tajangi, Pakabu, Busulakota, Sanivaram, Anjalam

Constraints Identified in the district

- Major area is under single-cropping system of paddy grown with coarse grain variety which is not consumed in local market
- Low productivity of horticulture plantations
- Low resource use efficiency (ex., Paddy-Fallow)
- Lack of access to markets
- Poor mechanization
- Local buffalo breeds giving low milk yield (2-4 lit/day)
- Subsistence vegetable cultivation
- No processing industries

Major interventions in the villages

- Soil test based balanced fertilization
- Seed replacement of paddy with fine and super fine varieties
- Increasing cropping intensity by growing rabi crops in rice fallow
- INM for increasing yields of horticulture plantations
- Linking farmers to markets
- Mechanization for reducing cost of cultivation
- Breed improvement with elite breeds
- Crop diversification with high value crops
- Modernization of processing industries as well as establishing new units

Thank you

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7

AP Primary sector Mission project.

Selection process for pilot Area in Vizianagaram district

LS Jangawad

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AP Primary sector Mission project.

Identification of pilot site of site10,000 ha:

Criteria adopted.

- Representative site for the district
- Good potential for impact to bridge the gaps
- Accessibility
- Willingness to adopt new technology
- Presence of suitable institutions
- Predisposition for change

- Selected site representing the district Agriculture crops, Horticulture crops, fisheries, Animal Husbandry and DWMA department activities to be incorporated and participate actively.
- Preliminary meeting held at JDA office along with CPO Vizianagaram and all heads of line department- Agriculture, Animal Husbandry, Horticulture, Fisheries, Sericulture, Marketing and Scientists from ARS Vizianagaram.
- Everybody felt that as there are 2 revenue divisions Vizianagaram and Parvathipuram and each one site of 5000 ha compact area to be selected for all department activities and mainly to incorporate DWMA watershed activity.

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- Each divisions 2 Mandal were selected and left for choice of Collector for finalizing the Parvathipuram Division it was parvatatipuram and Salur mandal. The vizainagaram it was S.kota and Puspatirega Mandal specially to cover fisheries activity villages as per ADF suggestion.
- The finally team with all heads of line department along with CPO and ICRISAT Coordinator met Collector and presented the selection made and asked for his final decision and finally collector asked all team members is it ok as I am interested in parvathipuram and Pusapatirega and Approved and finalized.
- The list of villages covering 5000 ha are in compact location was finalized and put on map.
- Secondary data of these villages are collected for Mandal statistical officer with advise of CPO for all line departments.
- Detail baseline survey will be taken up for getting data for all selected Mandal villages starting in April 1st week 2015.

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Meeting at JDA office with all line department heads on 5th of March 2015

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PRIMARY SECTOR MISSION PROJECT - VIZIANAGARAM DISTRICT
IDENTIFICATION OF DIVISION WISE TARGETTED MANDALS TENTATIVELY FOR CONVERGING DIFFERENT ACTIVITIES FOR DEVELOPMENT
TARGETTED AREA - 10000 ha., 2015-16

Sl.No.	Department concerned	VIZIANAGARAM REVENUE DIVISION		PARVATHIPURAM REVENUE DIVISION	
		PUSAPATIREGA	S.KOTA	PARVATHIPURAM	SALUR
1	AGRICULTURE CROPPED AREA	5372 HA.	6098 ha.	7966 HA.	9886 ha.
2	ANIMAL HUSBANDARY BASIC DATA				
	A. CATTLE AND BUFFALOES	14878 Nos.	10227 Nos.	15273 Nos.	4200 Nos.
	B. SHEEP AND GOAT	18600 Nos.	4500 No.	13000 Nos.	2500 Nos.
3	D.W.M.A.(WATESHED PROGRAMME)	NIL	3202 ha.,	4375 ha.	4198 ha.
4	HORTICULTURE	2650 ha.	1480 ha.	1840 ha.	5600 ha.
5	FISHERIES	Marine and Inland fish	Inland fish	Fishiculture tanks and Societies	Inland fish
6	MARKETING	Sub Market Committee at Bhogapuram	NIL	AMC, Jute Marketing	AMC Cotton Marketing
7	SERICULTURE	NIL	2.6 ha.,	NIL	6.4 ha.,

DISTRICT PLANNING OFFICER, VIZIANAGARAM

DISTRICT COLLECTOR, VIZIANAGARAM

R.C.No.65/2015/C.P.O-Agrl-I,dated 05.03.2015

Planning wing, Vizianagaram.

Note Submitted to the District Collector

Sub: Andhra Pradesh Primary Sector Mission – Vizianagaram district – Providing assistance to District Scientific Coordinators for the pilot site by the District level Administration – proposals – submitted for selection of blocks – Request – Regarding.

Ref: Letter no.APC/01/Agrl/2015, dated 02.03.2015 of the Agrl.Production and Special Chief Secretary Govt of A.P, Hyderabad.

&&&

Kindly peruse the reference cited.

It is submitted that Primary Sector Mission must be implemented in 10,000 Hectares of cropped area in the District with convergence of Agriculture and allied departments so as to get considerable results in the coming years.

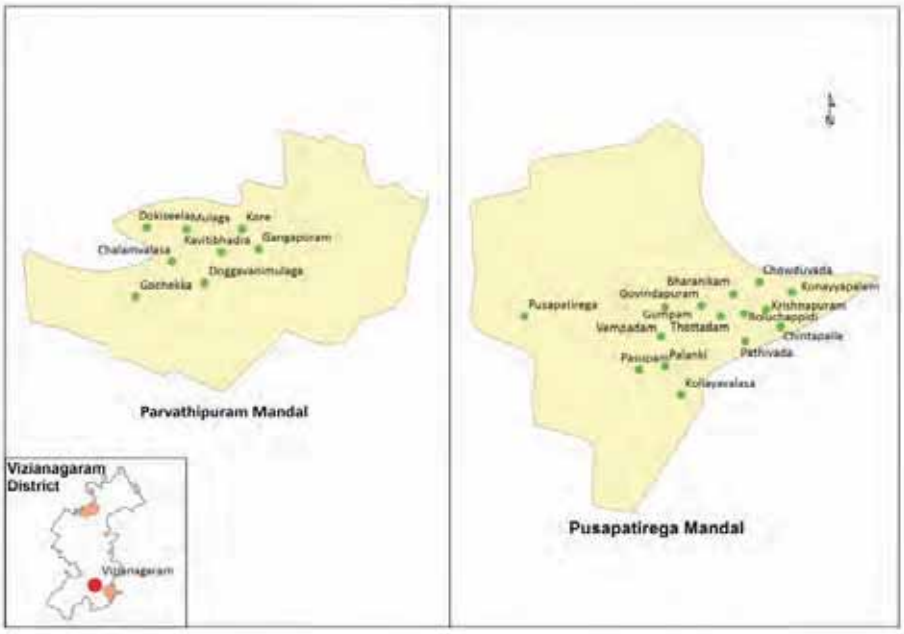
It is submitted that as per the reference cited, a meeting was conducted by Sri L.S Jangwad, Vizianagaram District Coordinator from ICRISAT, on 05.03.2015 at 11.00 A.M in the Office of Joint Director of Agriculture, with all the related District Officers i.e., J.D Agril, J.D (A.H), C.P.O, A.D - Fisheries, A.D (Horticulture), A.D, Marketing, and A.D Sericulture for selection and identification of pilot sites in the District to carry out the field work in the selected pilot sites for improvement of Primary Sector Mission in the District. In this meeting all the Officers were selected four mandals i.e., two mandals from each Division as per the instructions of the District Coordinator so as to request the District Collector for selection of one mandal from each division for take up the field work and to give necessary instructions to the Mandal level Officers.

In this regard, if the District Collector please, one mandal from each division may be selected from the proposed mandals which are selected by the district Officers in the meeting are submitted below for implementation of Primary Sector Missions.

Dist.Collector.

AP Primary sector Mission project.

Selected Mandal and villages of Vizianagaram district



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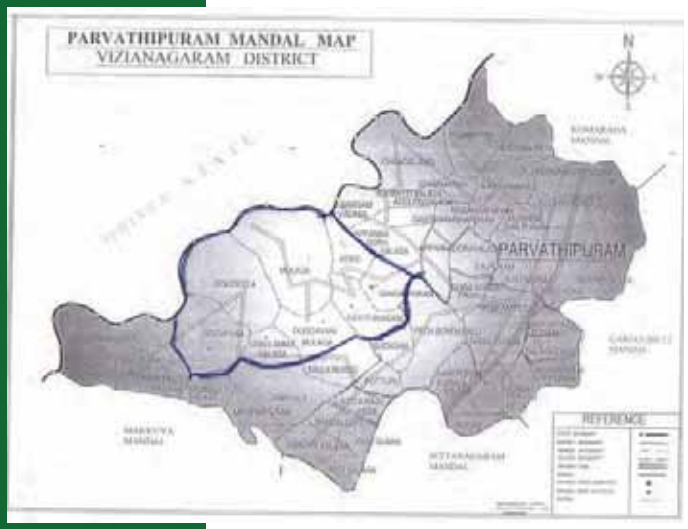

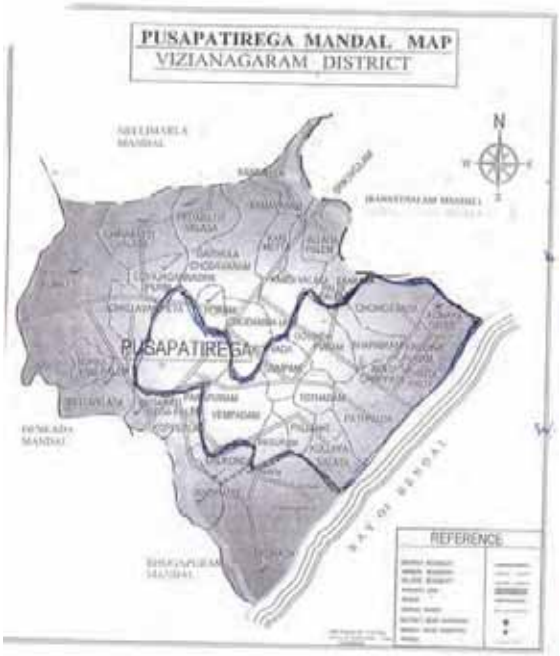

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Constraints Identified Across villages Based on Stakeholders Consultations

- Low seed replacement
- Low crop yields compared to state average
- Lack of remunerative price for produce
- Poor Weed and pest management
- Poor Drainage
- Low resource use efficiency (ex., Paddy-Fallow)
- Lack improved irrigation systems
- Labor scarcity
- Lack of access to market
- High cost of cultivation – Low resource use efficiency
- Fodder scarcity
- Poor mechanization
- Low milk yielders

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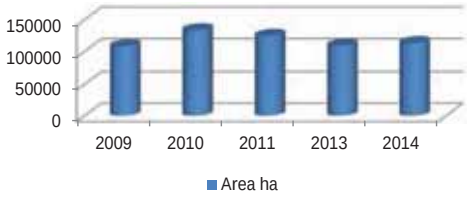
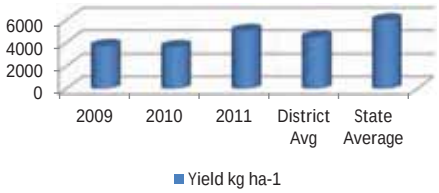
Vizainagaram district Maize Area, ha

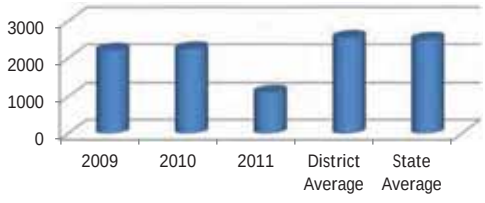
Vizainagaram district Paddy Area, ha



Vizainagaram district Maize Yield kg ha-1



Paddy Yield kg ha-1



AP Primary sector Mission project.

Statement showing the Village wise areas for the selected Pilot survey for Primary Sector Mission in respect of Vizianagaram District

Sl. No	Name of the Mandal	Name of the Village	Geographical area Ha
1	Parvathipuram (I)	Kore	443
2		Gangavaran	353
3		Kavitibhadra	241
4		D Mulaga	91
5		Mulaga	1957
6		Challamnaiduvalasa	181
7		Dokiseela	1415
8		Gochekka	439
		Bit-I Total	5120
1	Pusapatirega(II)	Pusapatirega	765
2		Pasupam	227
3		Pallanki	165
4		Vempadam	623
5		Gumpam	328
6		Kollayavalasa	395
7		Tottadam	202
8		Govindapuram	417
9		Chouduvada	414
10		Barinikam	269
11		Pathivada	543
12		Roluchappidi	81
13		Krishnapuram	114
14		Konayyapalem	196
15		Chintapalli	415
		Bit -II Total	5153
	Grand Total Bit- I and II		10273

Average crop yield kg ha-1, 2014
District:Vizianagaram

S NO	NAME OF THE CROP	Average yield in Kg/acre	Average yield in Kg ha^{-1}
1	SESSAMUM	329	822
2	BAJRA	493	1233
3	KORRA	592	1481
4	PADDY	1725	4312
5	G NUT	647	1617
6	MESTA	1833	4584
7	RAGI	727	1818
8	MAIZE	2023	5058
9	COTTON	369	921
10	SUGARCANE	32033	80083

Horticulture crops of district (ha)-2014

	Vizianagaram District	Parvathipuram	Pusapatirega
All crops grown	82416	1921	2864
Fruits and Vegetables	55727	688	1557

AP Primary sector Mission project.

Observation made in district:

- Most of the official the project was new and were not aware of it and its activity.
- Everybody was interested know about budgetary allocation for this project
- The area under maize crop is increasing every year and also the present yield level is about 4000-4400kg ha^{-1} and there is potential to improve yields by adopting improved soil water and nutrient management with high yielding hybrids.
- There is possible area increase in oil palm cultivation. Conversion of traditional and local Banana with tissue culture banana for improvement in production. Cocoa cultivation as inter cropping with banana.
- Improved milk production with support of improved fodder availability and milk collection center.

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AP Primary Mission: West Godavari district

25 March 2015

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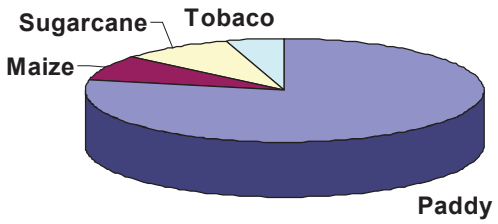
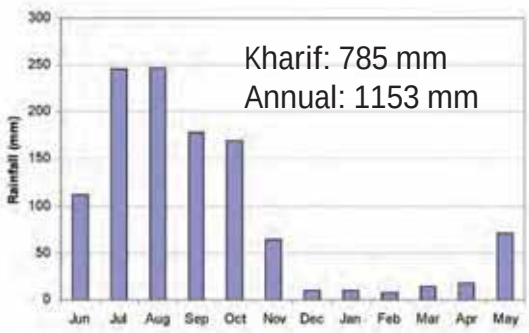
District as a glance





Land use	Area (ha)	Remark
Geographical area	774000	
Net Cropped area	440000	56% of total geographical area
Gross cropped area	728000	165% cropping intensity
Net Irrigated area	393000	89% of total cultivable land
Gross Irrigated area	673000	92% of total gross cultivable area
Livestock Population	14 lakh	
Inland Fish production (2010)	597946 tons	
Marine Fish Production (2010)	3998 tons	

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Process for selecting Pilot villages

Criteria of village selection

- Representing dry land and delta region of district
- Capturing major cropping/farming system of the district
- Technology should be scalable to other mandal in future
- Area based approach

Process involved

- Meeting with District administrator (Collector and CPO)
- Meeting with Line department officials at district and Mandal level
- Interaction with farmers and community

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Cropping pattern of KAMAVARAPUKOTA Mandal

Sectors	Crops	Kharif: Area in ha	Kharif: Area in ha
Agriculture	Paddy	3838	405
	Maize	89	4250
	Sugarcane	427	728
	Oil seed (Palm oil)	5783	176
Horticulture	Fruit crops (Lemon, Mango)	2757	491
	Coconut	594	
	Tobacco		300
	Others	103	
	Total	13488	6350

Total geographic area of Mandal = 20267 ha
Selected four villages covering 5000 ha: Uppalapadu; Ravikampadu; Ramannapalem; Kamavarapukota

Identified pilot villages of Akivedu mandal

Mandal	SN	Pilot villages	Geographic area (ha)	Agriculture (ha)	Horticulture (ha)	Fisheries (ha)
Akivedu	1	Dharmapuram	508	280	-	170
	2	Taratava	240	42	-	145
	3	Siddapuram	1299	523	-	190
	4	Madivada	616	329	-	114
	5	Akivedu	1111	660	-	131
	6	Dumpagadapa	398	181	-	50
	7	A. I Bheemavaram	703	378	-	177
	8	Cherukumilli	671	470	-	45
		Total	5546	2862		1022

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Key observations/constrains: K. Kota

- Scope for soil test based nutrient management as use of fertilizer is more than required level
- Palm oil trees, coconut, coconut with coco intercrops, lemon, mango are the important Horticulture; Value addition is needed
- Water application in Palm oil tree is 300 L/day/tree
- Harvesting of Palm fruits especially for aged tree is critical due to spiny nature: Mechanization is needed
- Groundwater in these Mandal/villages found in depleting trend (semi-critical to safe range): need for water management
- Number of maize farmers are found in tie up with private company for seed production especially during Rabi



Key observations/constrains: Akivedu

- Paddy yield are poor (1.5-2.0 ton/ha) due to salinity, poor drainage and heavy flooding
- Paddy response by applying micro-nutrient was very positive under BC program
- Heavy machines are not suitable for taking sowing operation as fields are largely flooded and drainage is poor.
- Farmers presently follow Vara bandi system for canal water use. Water use association is defunct but it was very useful
- Good quality green folder is short due to non-availability of land;
- Some farmers cultivate cowpea in summer as fodder for livestock feeding
- Major disease in livestock is Amphistomes caused by Protozoan.
- Farmers concern is much on Virus infection in Prawns ponds



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International Crops Research Institute for the Semi-Arid Tropics

CG Centers Presentations

IRRI

International Rice Research Institute

Modern Rice varieties as entry point for improved System Agronomy

ICRISAT, Patancheru
March 25-26, 2015

IRRI

Immediate Solution

For stress prone are

- Swarna sub-1 (submergence tolerant)
- Sabhagi dhan (drought tolerant)

Direct seeded rice

- CR dhan (202/303?)

Medium term approach

- Submergence tolerant- Swarna sub1, Sambha Mahuri sub1
- Drought tolerant- Sahbhagi dhan, DRR dhan 43, DRR dhan 44, IR64 + drought, MTU1010 + drought, Sambha Mahsuri + drought
- Multiple tolerant- Sub+ drought, sub+ salinity, sub + stagnant flooding, sub+ anaerobic germination
- Varieties suited for dry direct seeded situations – 20% more yield than MTU1010
- Water saving rice varieties- aerobic rice- drought prone areas
- Water saving rice varieties- AWD, wet seeding, mechanized transplanting

IR64 drought

Swarna sub1+ drought

-Sub1 +Sub1

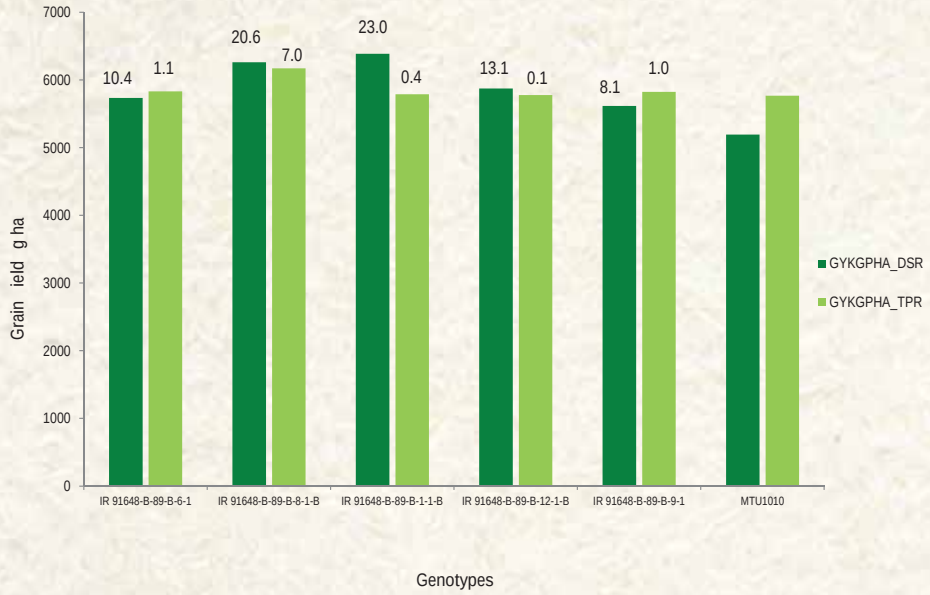
Sambha Mashuri+ drought at SA Hub, 2014WS

DESIGNATION	DTF	Height	GYNS (kg/ha)	GY S (kg/ha)
IR 99734:1-33-228-2-8	84	98	10789	3097
IR 99734:1-33-229-1-5	74	104	11325	3418
IR 99734:1-33-229-1-8	79	97	10282	3614
IR 99734:1-39-47-2-17	77	93	9594	2344
IR 99734:2-23-2-13	83	87	10047	2114
IR 99734:1-33-304-1-10	83	87	9702	2038
IR 99734:1-39-83-1-54	82	90	11882	1999
IR 99734:1-39-83-1-8	80	95	10145	1989
IR 99734:1-39-83-1-51	80	89	9435	1917
IR 99734:2-23-2-5	81	80	9881	1821
IR 99734:1-39-83-1-70	79	99	11071	1731
IR 99734:2-23-2-14	78	91	12345	1728
Sambha Mahsuri	102	87	9753	141
SWARNA	103	92	8527	58

MTU1010+ drought at SA Hub, 2014WS

DESIGNATION	DTF	Height	GY NS (kg/ha)	GY S (kg/ha)
IR 91633-17-1-1-1-2-B	94	94	5130	1253
IR 91633-29-2-1-1-1-B	94	104	5992	1135
IR 91631-28-1-2-1-3-B	95	104	5099	1044
IR 91633-45-2-1-1-1-B	96	95	5497	978
IR 91633-53-1-2-1-1-B	95	102	4959	858
IR 91633-59-1-1-1-3-B	95	92	4151	899
MTU1010	95	102	4929	498
IR 64	95	87	4439	376
$LSD_{0.05}$	2	7	1446	569

Varieties fit to variable situations



Percent increase in yield under TPR and DSR over MTU1010

System Agronomy: what options are there?

Mechanization: 'tipping point' for Modern Agronomy
: Targeting system than activity

Crop establishment method : Dry seeded rice, Non-puddled transplanted rice

Efficient Water management: improved conveyance, precise schedule, reducing energy and pumping cost

Efficient fertilizer mangement: Rice crop manager

Post-harvest: early threshing, drying and

Activities proposed:

- Popularize flood tolerant, drought tolerant and dry direct seeded rice varieties in suited ecology in Andhra Pradesh among farming community.
- Introduce mechanized system of rice cultivation to increase farmers' income and reduce hardships.
- Increasing the productivity of rice and rice based cropping systems economically and reduce the yield gap.
- Extending capacity building activities to stake holders.

Out comes expected:

- Increase in productivity and production of rice, economically, in the Andhra Pradesh state with the adoption of IRRI technologies.
- Replacement of existing cultivars used by farmers with improved high yielding pest resistant cultivars.
- Trained agricultural department staff to handle the farmers on-farm needs and upscale the demonstrated technologies.

IRRI

Thanks

Government of Andhra Pradesh – CGIAR consortium Primary Sector Project

AVRDC – The World Vegetable Center

Presented by Ram Nair

Geographical
Six of AP's 13 Districts *(Potential for Impact)*

Product
Tomato, Chili, Onion, Eggplant *(High Value Contributors to State's Agricultural Growth Engine)*

Coverage
20,000 Ha over 5 years
(5000 Ha for each crop)

Tomato

District	Area (Ha)	Constraints / Issues	Interventions
Kurnool	2500	Lack of improved varieties, Lack of varieties suitable for processing, Incidence of bacterial wilt, Improper staking, Lack of processing industries, Postharvest losses	Introduction of high yielding varieties; open pollinated varieties suitable for processing; Proper staking and trellising; Protected cultivation; mulching; drip irrigation/fertigation; Integrated Pest Management(IPM) Introduction of fresh produce handling and processing technologies that are compatible with value chain requirements
Chitoor	2500		
Present value	**5000**	**150 Cr**	**Projected: 300 Cr**

Chilli

District	Area (Ha)	Constraints / Issues	Interventions
Guntur	2500	Improper drying, Aflatoxin contamination, Indiscriminate use of pesticides Susceptibility to Leaf curl virus	Introduction of simple solar dryers and good drying practices Introduction of IPM and other good agricultural practices, Pesticide residue testing, Promotion of varieties resistant to leaf curl virus, suitable for oleoresin extraction, and suitable for rapid drying
Prakasam	2500		
Present value	**5000**	**125 Cr**	**Projected: 225 Cr**

Onion

District	Area (Ha)	Constraints / Issues	Interventions
Kurnool	5000	Lack of improved varieties Low bulb size Improper storage & drying facility Onion blight Poor nursery management	• Introduction of improved varieties, • IPM & Integrated Nutrient Management (INM), • Solar dryers, • Improved handling and storage techniques and facilities
Present value	**5000**	**120 Cr**	**Projected: 150 Cr**

Eggplant (Brinjal)

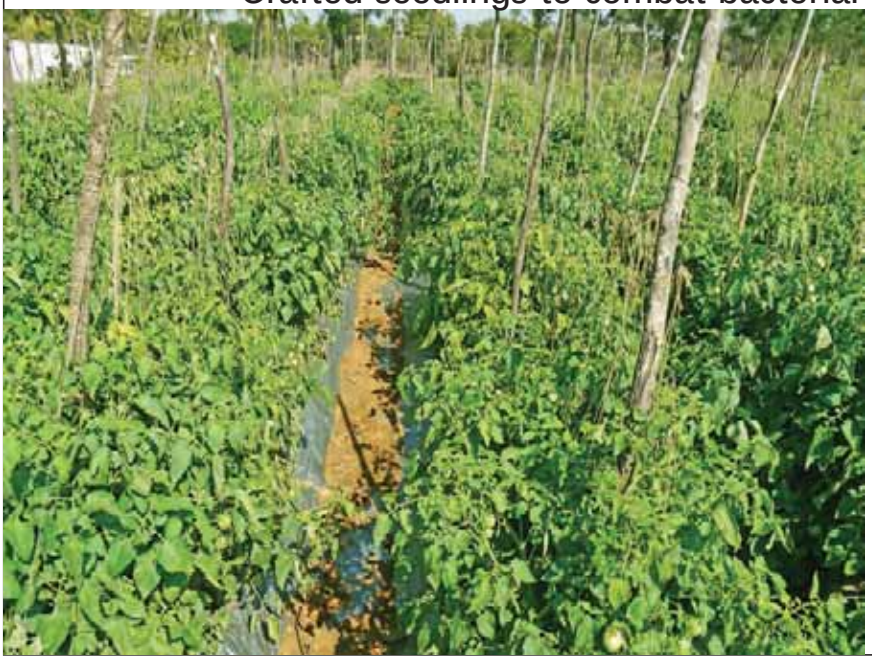
District	Area (Ha)	Constraints / Issues	Interventions
East Godhavari	2500	Fruit & Shoot borer Indiscriminate use of pesticides	• IPM • Mulching & drip irrigation
Vijayanagaram	2500		
Present value	**5000**	**75 Cr**	**Projected: 108 Cr**

Tomato – Improved practices

Staking

Mulching (15% increased yield); Labour costs reduced by 30-40%)

Grafted seedlings to combat bacterial wilt

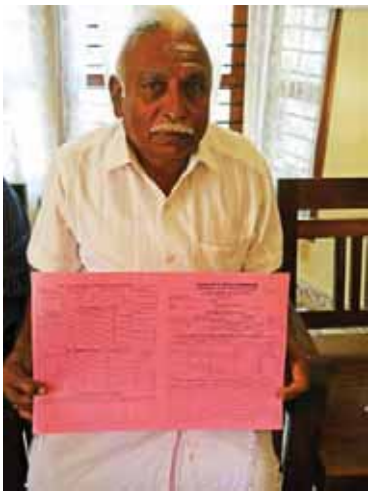


Protected cultivation

AVRDC The World Vegetable Center

Reduced incidence of pests and diseases
Improved yield and quality of produce

Integrated Pest Management & Value adding in Chillies



20-30% improved price

Reducing post harvest losses and improved quality –

Low cost solar dryers

Introduction of improved varieties of crops -

Nasik red variety of onion introduced
(30% increase in yield)


AVRDC - The World Vegetable Center
“Prosperity for the Poor & Health for All”

Thank You!

AP Primary Sector Mission Strategy

Interventions by CIMMYT on Maize in Pilot Areas
March 25, 2015

CIMMYT Interventions

Sector	Drivers	Strategies	Proposed Interventions
Agriculture	Grow More Food grains in Sustainable Manner	Bridge crop yield gaps	Enhancing the productivity of Kharif maize by introducing drought resilient maize hybrids
		Enhance the utility of rice fallows	Enhance the utility of rice fallows by introducing maize hybrids tolerant to excess moisture, drought & heat
		Pulses and oilseeds revolution	Enhance productivity & profitability by identifying suitable maize, pigeon pea and groundnut germplasm for intercropping system.
Animal Husbandry	Enhance milk production and productivity/animal enable all supporting services	Meet growing fodder demand and create a feed and fodder development program	Deployment of high yielding maize hybrids having superior stover/green fodder value

Trialing Time line

Year	Activity	2015	2016	2017	2018	2019
1	Stage II trials	100 hybrids				
2	MLT/stage III trials	25	25			
3	Strip trials		6	6		
4	Demo/stage 6.2			2	2	
5	1st year of commercial sale/ test marketing				1000 ha /district	1
6	large scale cultivation					2000 ha /district

Trialing Scheme

Stage	# of hybrids/trial	# of trials/ district
Stage II	100*	2
Stage III/MLT	25	6
Stage iv/Strip/FFT	6	20
Demonstration	2	50
Commercialization	1	1000 ha

Kharif maize

- About 45% of total maize area is in the Kharif season (1.1 lakh ha) with productivity of 3.7 tons/ha. This productivity is about 50% of that of the Rabi season.
- Anantapur and Vijayanagaram, the productivity is even lower (2.5 to 2.7 tons/ha, which is about 60% of productivity of Kurnool, a major Kharif maize growing district- 4.8 t/ha).
- The hall mark of CIMMYT germplasm is stress resilience (good yield under optimal conditions and tolerance to drought, heat and biotic stresses).

Outcomes:

1. Enhance the productivity of maize in the drought-hit areas of the Kharif season, by at least 1 ton/ha, by introducing drought resilient maize hybrids,
2. Enhance the profitability of maize farming households through added stover value in drought resilient maize hybrids (linked to Intervention 2.3)

CIMMYT

Kharif Maize

Objectives:

1. Deployment of identified maize hybrids with drought resilience by involving seed partners (both public sector and private sector).
2. Establish a network of partnerships with end user industry for sustaining demand for their raw material.

Districts to be covered:

1. Anantapur
2. Kurnool
3. Vijayanagaram
4. Vishakapatnam
5. Srikakulam

Proposed Activities

1. Evaluation (from Stage II till registration through Multi-location trials (MLT), Farmers Field Trials (FFT) and demonstrations) and release of drought resilient maize hybrids having at least 5 tons/ha productivity in the target districts with stover of acceptable fodder quality (linked to Intervention 2.3).
2. Deployment of identified maize hybrids with drought resilience by involving seed partners (both public sector and private sector).

Benefits starting from: 2018

Partners:

1. AP Agricultural University
2. AP Seed Development Corporation
3. Department of Agriculture
4. Private Seed Companies (2-3 to be identified)
5. AP Dairy development Board
6. Animal feed manufacturers, starch confectionary industry.

Period: 5 years (2015-2020)

CIMMYT

2. Rice fallow Maize

- 3.1 lakh ha in AP (Subbarao et al. 2001). Out of this 0.8 lakh ha is in East and West Godavari Districts alone. Other major districts with substantial rice-fallow areas are Krishna, Guntur, Srikakulum, Nellore and Prakasam.
- Department of Agriculture of the Government of AP is working on introducing maize in rice fallow areas of North coastal districts of Srikakulam, Vizianagaram and Visakhapatnam as well as in central districts like East Godavari, Krishna and Guntur.
- Maize hybrids suitable for such zero till conditions + Excess moisture, drought & Heat

Outcomes:

- Enhance the utility of rice fallows by introducing maize hybrids tolerant to excess moisture, drought and heat.
- Enhance the profitability of maize farming households through added stover quality in maize hybrids tolerant to excess moisture, drought and heat. (linked to Intervention 2.3)

CIMMYT

Rice fallow maize

Objectives:

1. Deployment of identified maize hybrids with tolerance to excess moisture, drought and heat by involving seed partners (both public sector and private sector).
2. Establish a network of partnerships with end user industry for sustaining demand for their raw material.

Districts to be covered:

1. East Godavari
2. West Godavari
3. Krishna
4. Guntur
5. Prakasam

Proposed Activities

1. Evaluation (from Stage II till registration through multi-location trials (MLT), Farmers Field Trials (FFT) and demonstrations) and release of maize hybrids tolerant to excess moisture, drought and heat and having at least 5 tons/ha productivity in the target districts with stover of acceptable fodder quality (linked to Intervention 2.3).
2. Deployment of identified maize hybrids with the involvement of seed partners (both public sector and private sector).

Partners:

1. AP Agricultural University
2. AP Seed Development Corporation
3. Department of Agriculture
4. Private Seed Companies (2-3 to be identified)
5. AP Dairy development Board
6. Animal feed manufacturers, starch confectionary industry.

Period: 5 years (2015-2020)

CIMMYT

Maize for fodder and stover

- India currently is facing a shortfall of 63 % green fodder, 23 % dry crop residues and 64% feeds (Dhananjoy Datta 2013).
  - Stalk of maize (stover) is also an important crop residue for livestock feeding.
  - But in most of India, including AP, maize stover is not used as fodder as maize is a relatively new crop.
  - Extensive research done by ILRI has indicated substantial variability in fodder quality in commercially grown hybrids.
  - Compared to stover of sorghum and millet, some of the maize hybrids exhibit far better fodder quality and a few are at par.
  - No negative correlation between fodder quality with grain yield and fodder quality and fodder yield.
  - Identifying maize hybrids with good yield and fodder value would be impactful in enhancing farmers' livelihoods.

Outcomes:

- Enhance the availability of quality dry fodder by introducing maize hybrids, having superior stover value in Kharif maize growing areas and in rice fallows of coastal AP.
- Enhance the profitability of maize farming households through added stover quality in maize hybrids.

Maize- Green fodder

- Maize is good for silage making as its chemical composition meets the requirements of a good silage (Nussio et al., 2001).
- Average green fodder yield is 40-50 t/ha.
- To identify hybrid with better production potential and nutritional quality for silage.

Outcomes:

1. Enhance the availability of quality green fodder for dairy industry by introducing maize hybrids, having superior green fodder value in around proposed dairy clusters.

CIMMYT

Maize- Green Fodder

Objectives:

1. Deployment of identified maize hybrids with high green fodder quality by involving of seed partners (both public sector and private sector).
2. Establish a network of partnerships with end user industry for sustaining demand for their raw material.

Clusters to be covered:

1. Vijayawada and Guntur
2. Vishakhapatnam
3. Rajahmundry and Kakinada
4. Tirupathi
5. Kurnool

Proposed Activities

1. Evaluation (from stage II to registration through MLT, FFT & demonstrations) and release of maize hybrids with acceptable stover quality in the target districts
2. Rapid deployment of identified hybrids by Involving of seed partners (both public sector & private sector) at all trialling stages and decision making.
3. Buying in from Dairy farms on quality of green fodder to meet their fodder requirements.

Partners:

1. ILRI
2. AP Agricultural University & AP Veterinary University
3. AP Seed Development Corporation
4. Department of Animal Husbandry
5. Private Seed Companies (2-3 to be identified)
6. AP Dairy development Board
7. Dairy Farms (1 each per cluster)

Period: 5 years (2015-2020)

CIMMYT

Intercropping system.

- Intercropping legumes with non-legume crops during the rainy season (wet season) is a common practice in the semi-arid tropics of India.
- Maize & pigeon pea and maize & groundnut are few of the key intercroppings followed.
- Many studies have indicated the advantages of intercropping of maize and pigeon pea with Land Equivalent Ratio (LER) as high as 2.10. (farmer will have higher yield for intercrop compared to monocrop using the same hectarage
- Saving in N application up to 25 per cent of recommended dose if intercropped with legumes.
- Reduced weed competition due to intercropping of legumes in maize due to early ground cover.
- Many experiments have shown marked interaction between genotypes of the two crops
- need for identification and selection of genotypes within the actual intercrop situation - performance in intercropping may not be very closely related to genotype performance in sole cropping

CIMMYT

Intercropping

Objectives:

1. Enhance the profitability of farming households by introducing suitable maize, pigeon pea and ground nut varieties, in maize- pigeon pea and maize- ground nut intercropping systems by enhancing LER to 2.0.
2. Involvement of seed partners (both public sector & private sector) for scaling up & deployment of identified maize hybrids for sustaining the advantages of the above technological interventions

Districts to be covered:

1. Maize- Pigeon pea intercropping system
   a. Anantapur
   b. Kurnool
   c. Prakasham
   2. Maize- ground nut intercropping system
   a. Anantapur
   b. Chittor
   c. Kurnool
   d. Cuddapa

Proposed Activities

1. Evaluation (from stage II to registration through MLT, FFT & demonstrations) and release of maize hybrids and varieties of pigeon pea and groundnut varieties enhancing productivity of intercropping in the target districts
2. Rapid deployment of identified hybrids by Involving of seed partners (both public sector & private sector) at all trialling stages and decision making.

Partners:

1. ICRISAT
2. AP Agricultural University
3. Directorate of Oilseeds Research (DOR)
4. AP Seed Development Corporation
5. Department of Agriculture
6. Private Seed Companies (2-3 to be identified)
7. One to two partners from dal manufactures, and vegetable oil industry

Period: 5 years (2015-2020)

CIMMYT

Indicative Budget

Yearwise Budget(INR Lakhs)						
Project	**2015-16**	**2016-17**	**2017-18**	**2018-19**	**2019-20**	**Total**
Kharif Maize	202	116	79	114	70	581
Rice fallow maize	184	116	79	114	70	563
Stover maize	6	4	2	2		15
Green Fodder maize	69	118	77	115	70	450
Intercropping system	74	142	86	123	70	494
Total	**535**	**496**	**324**	**468**	**280**	**2103**

CIMMYT

ROI

Intervention	Years after com'sation	Year of com'sation	Area covered (ha)	Additional Value (Lakhs)	Project Budget
Kharif maize	1	2018	5000	1682	581
	2		25000	8408	
	3		50000	16815	
	4		62500	21019	
Rice Fallow maize	1	2018	5000	2163	563
	2		25000	10813	
	3		50000	21625	
	4		62500	27031	
Green fodder	1	2017	10000	72800	450
	2		75000	56875	
ICS	1	2019	50000	2122	494
	2		250000	10608	
	3		500000	21215	
	4		1000000	42431	

RESEARCH PROGRAM ON Water, Land and Ecosystems

CGIAR

IWMI

Government of Andhra Pradesh
Primary Sector Development

Team Building and Planning Workshop

International Water Management Institute

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Bioversity · WATER & FOOD · CIAT · ICARDA · ICRISAT · IITA · ILRI · WorldFish

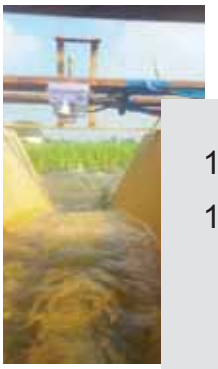
CGIAR

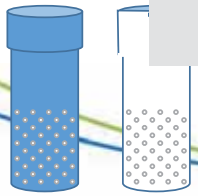
Intervention 1 - Direct seeding of rice

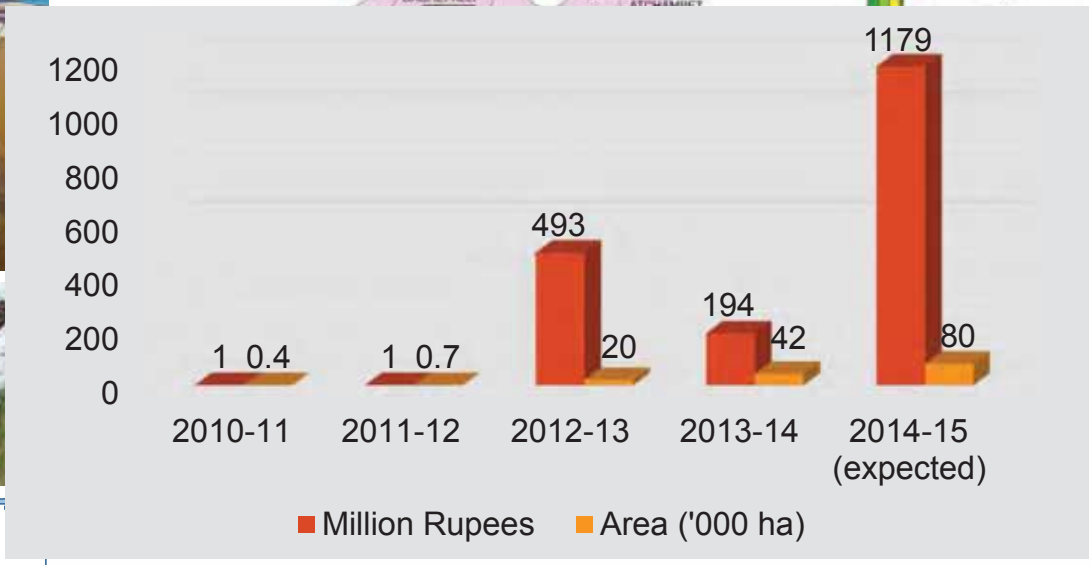
➢ Features of interventions
- Variety: BPT 5204
- Direct seed sowing above 2.5 cm depth
- Weed management is essential using specified herbicides and manual weeding

➢ Outcomes of the intervention
- Lower cultivation costs due to reduced labour cost
- 50% reduction in seed rate (12-18 kg/acre)
- Reduced water usage by 25%
- More productive tillers and panicles
- Less incidence of pests and diseases
- Early harvest (7-10 days)

Upscaling of direct seeding of rice – Guntur district, AP

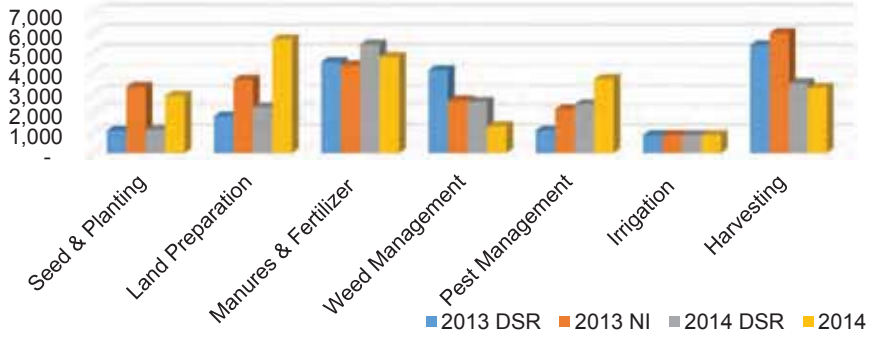






Uniting agriculture and nature for poverty reduction

Cost benefits of direct seeding of rice



Nagarjuna Sagar Project:

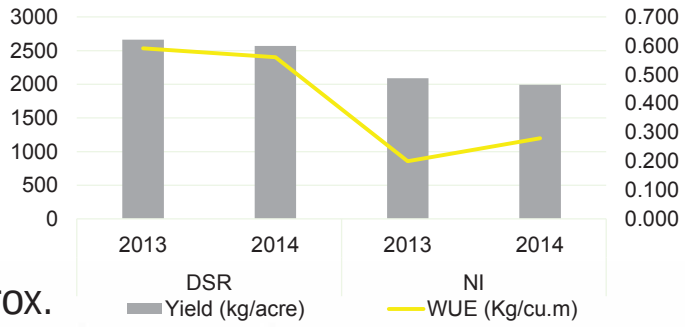
Right canal area: 0.47 m.ha

Left canal area: 0.42 m.ha

Water utilisation: 7,465 Mm^3

NI paddy: 17500 m^3/ha

DSR: 11500 m^3 /ha (saving approx. 25%)



Uniting agriculture and nature for poverty reduction

Intervention 2: Micro-irrigation and solar powered pumps

- Individual farmers
- Cluster approach

- Water requirement of crops; monthly water budgets and water saving methods
- Scheduling of irrigation based on crop growth stages
- Fertigation schedules
- Drip maintenance, cleaning of filters, acid treatment of drippers to remove clogging
- Training manual on drip and sprinkler irrigation technology in Kannada
- Integration of solar with ponds/wells and micro irrigation

Micro irrigation cluster approach

Other Interventions

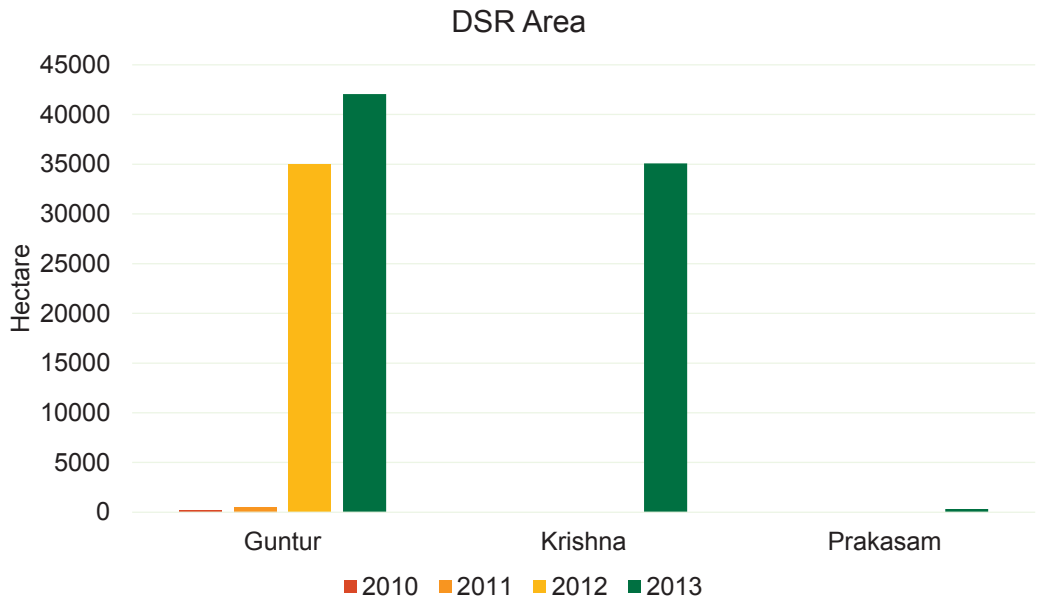
Improve soil organic matter	Use of waste-based organic fertilizer (co-composting and pelletising). Business models for waste-based fertilizers/soil ameliorants with private sector involvement.
Safe food production	Interventions for wise use of available water resources. Guidance for safe use of polluted water. Develop appropriate guidelines.
Groundwater recharge	Landscape mapping for MAR structures
Flood risk mapping	Real-time flood forecasting methods and associated tool development
Use of GIS/RS tools for tank rehabilitation	A package of tools and technologies that can be used to increase land area for crop production.

Economic and hydrologic feasibility of intra-state water transfers in AP

- Intra-basin water transfers
- Inter-sectoral water transfers
- Flood water transfers
- Economics of water transfers from Godavari to Krishna delta
- Current water use in the river-basins of AP
- Projected water demand over a specified period of time
- Macroeconomic implications and institutional arrangements for large scale water transfers in AP

Thank you

Uniting agriculture and nature for poverty reduction



Uniting agriculture and nature for poverty reduction

Drip irrigation: Beans (0.5 acres)

Arecanut
Banana,
Mulberry,
Capsicum

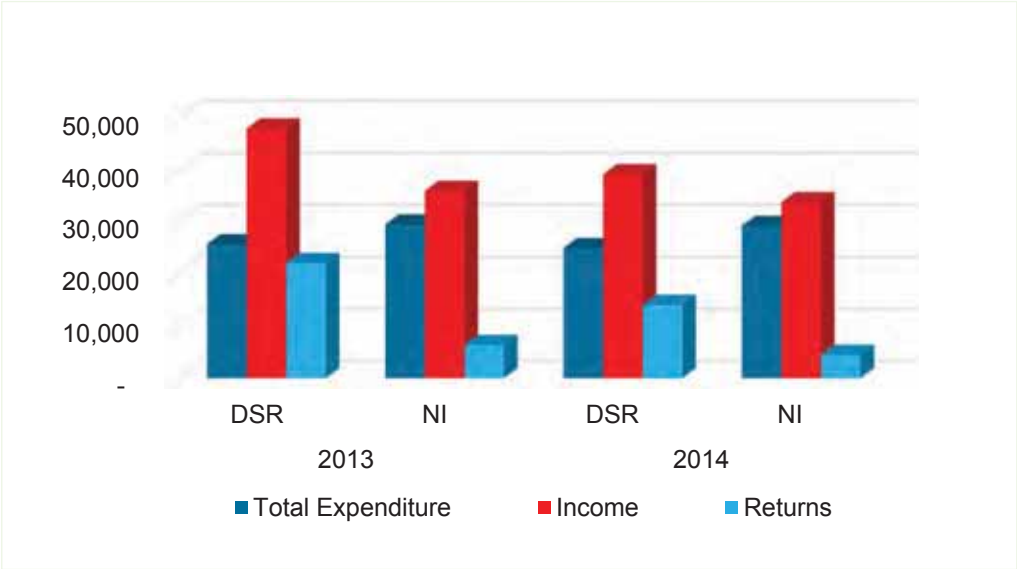
	Before training	After training
Duration	4 months	4 months
Yield (kg)	3500	5500
Cost/kg (INR)	20	20
Fertiliser application	205 tons FYM / year	Fertigation – once in 15 days 2.5 kg N, 5 kg P, and 4 kg K/ acre
Total income (INR)	60,000	1,10,000
Cost of cultivation (INR)	15,000	20,000
Net income (INR)	35,000	90,000

Uniting agriculture and nature for poverty reduction

Net Income (1 acre)

	Before training (INR)	After training (INR)
Arecanut	135,000	180,000
Banana	140,000	300,000
Ridge gourd	25,000	28,000
Capsicum	70,000	128,000

Uniting agriculture and nature for poverty reduction


50,000
40,000
30,000
20,000
10,000
-
DSR
NI
DSR
NI
2013
2014
Total Expenditure
Income
Returns

Strategies for primary sector development in AP- Livestock component

International Livestock Research Institute

C/o ICRISAT, Patancheru

Government of Andhra Pradesh

Hyderabad

March 25, 2015

ILRI

INTERNATIONAL LIVESTOCK RESEARCH INSTITUTE

CGIAR

Strategies for intensifying dairy production in AP

1. Evidence based cultivars release higher stover/forage digestibility
2. Fortification and densification of crop residues (CR)
3. Reducing calving interval
4. Non descript animals up-gradation
5. Utilizing wastelands for biomass production

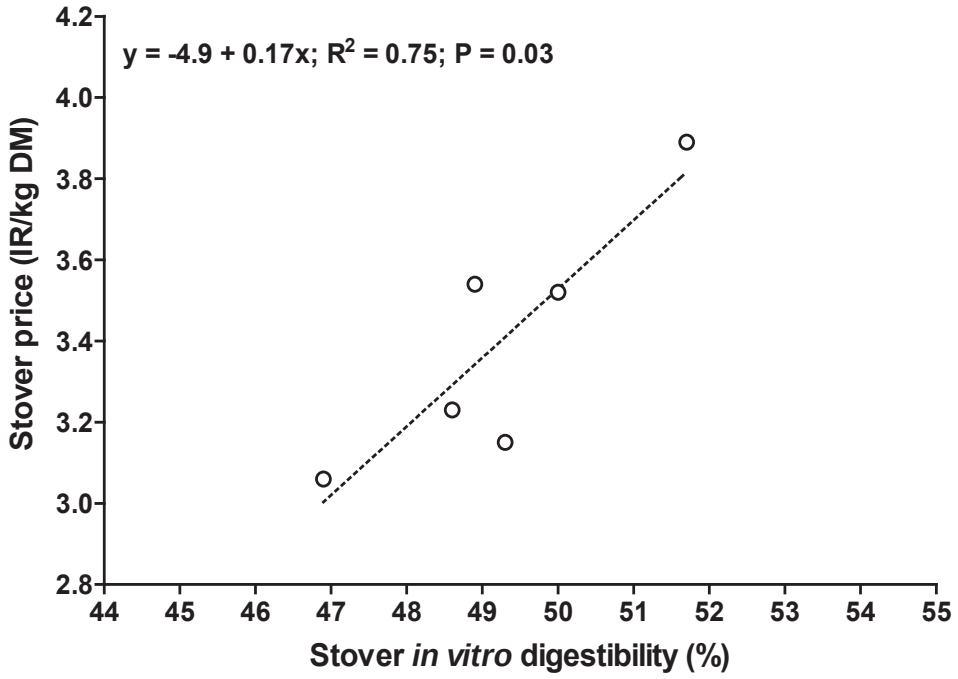
ILRI CGIAR

Key feed sources in India (2003)

Feed Resource	%
Crop residues	70.6
Planted fodder crops	15.1
Greens (F/F/CPR/WL)	7.9
Concentrates	6.3

(Blümmel et al., 2014)

Relation between digestibility and price of sorghum stover



Blümmel and Rao 2005

Importance of value addition to basal diet, feed processing/densification, fortification

Feed block manufacturing: supplementation, densification

Ingredients	%
Sorghum stover	50
Bran/husks/hulls	18
Oilcakes	18
Molasses	8
Grains	4
Minerals, vitamins, urea	2

Courtesy: Miracle Fodder and Feeds PVT LTD

Comparisons of premium and low cost sorghum stover based complete feed blocks in dairy buffalo

	Block premium	Block low cost
ME (MJ/kg DM)	8.46	7.37
DMI (kg/d)	19.7[a]	18.0[b]
DMI (% BW)	3.8	3.6
MEI (MJ/d)	167.1[a]	132.7[b]
Milk potential (kg/d)	16.6	11.8

Anandan et al. (2010)

Supplementation and processing of sweet sorghum bagasse and response in sheep

Parameter					
DMI (g/kg LW)	52.5[a]	55.6[a]	42.1[b]	41.5[b]	
ADG (g / d)	132.7[a]	130.4[a]	89.5[b]	81.3 [b]	
Processing ($/t)	5.9	7.0	5.2	1.7	
Transport ($/t/100km)	6.6	5.8	5.2	13.5	

Anandan et al. (2009b)

Is maize stover necessarily inferior to sorghum stover? Dairy buffalo in peninsular India

Parameter	Maize stover	Sorghum stover[1]
Milk yield (kg/d)	9.36	8.87
Stover offered (kg/d)	9.5	9.5
Conc. mixture offered (kg/d)	6.50	6.50
Income through sale of milk (Rs./d)	262.1	248.4
Cost of stover (Rs/kg)	3.8	6.3
Cost per kg milk (Rs/kg)	14.5	18.2

[1] Farmer paid ₹ 6 to 6.5/kg sorghum stover

Action plan

- **Dissemination of cultivars with higher grain, stover yield and stover digestibility**
- **Development of decentralized small scale business models around feed and fodder (CRs) especially for rural women and youth.**
- **Stakeholder sensitization on balanced feeding and development of tool for balanced feeding of dairy animals**

Thank you

Low Ranking Districts in Primary Sectors

AP Primary Sector Mission

Low Ranking Districts

ICRISAT Science with a human face

District Domestic Product

District Domestic product (Current Prices)						
S.No	District	GDP Category	Agriculture (Crores)	Agriculture Ranking		
				Rank 1	Rank 2	Rank 3
1	Ananthapur	II (32106)	9133	6624	-	-
2	Chittoor	II (31001)	7432	-	-	3972
3	East Godavari	I (46643)	14429	7441	-	-
4	Guntur	I (44600)	14722	10340	-	-
5	Kadapa	II (23643)	5708	4279	-	-
6	Krishna	I (55472)	15670	-	6819	-
7	Kurnool	II (30902)	11069	8302	-	-
8	Nellore	I (27039)	8590	4036	-	-
9	Prakasam	I (32302)	11665	7049	-	-
10	Srikakulam	III (17846)	4425	3089	-	-
11	Visakapatnam	I (65458)	5610	-	-	-
12	Vizianagaram	III (16386)	4498	2739	-	-
13	West Godavari	I (40785)	16275	7862	-	-
	State		129227			

State Double Digit Growth Agenda

- **High growth category I :** Visakhapatnam, East Godavari, west Godavari, Krishna, Guntur, Prakasam and Nellore districts
- **Medium growth category II:** Chittoor, Kadapa, Ananthapur and Kurnool districts
- **Low growth category III:** Srikakulam& Vizianagaram districts

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Agriculture % District DDP

S.No	District	Agriculture as % Dist DDP
1	Ananthapur	28
2	Chittoor	24
3	East Godavari	31
4	Guntur	33
5	Kadapa	24
6	Krishna	28
7	Kurnool	36
8	Nellore	32
9	Prakasam	36
10	Srikakulam	25
11	Visakapatnam	9
12	Vizianagaram	27
13	West Godavari	40

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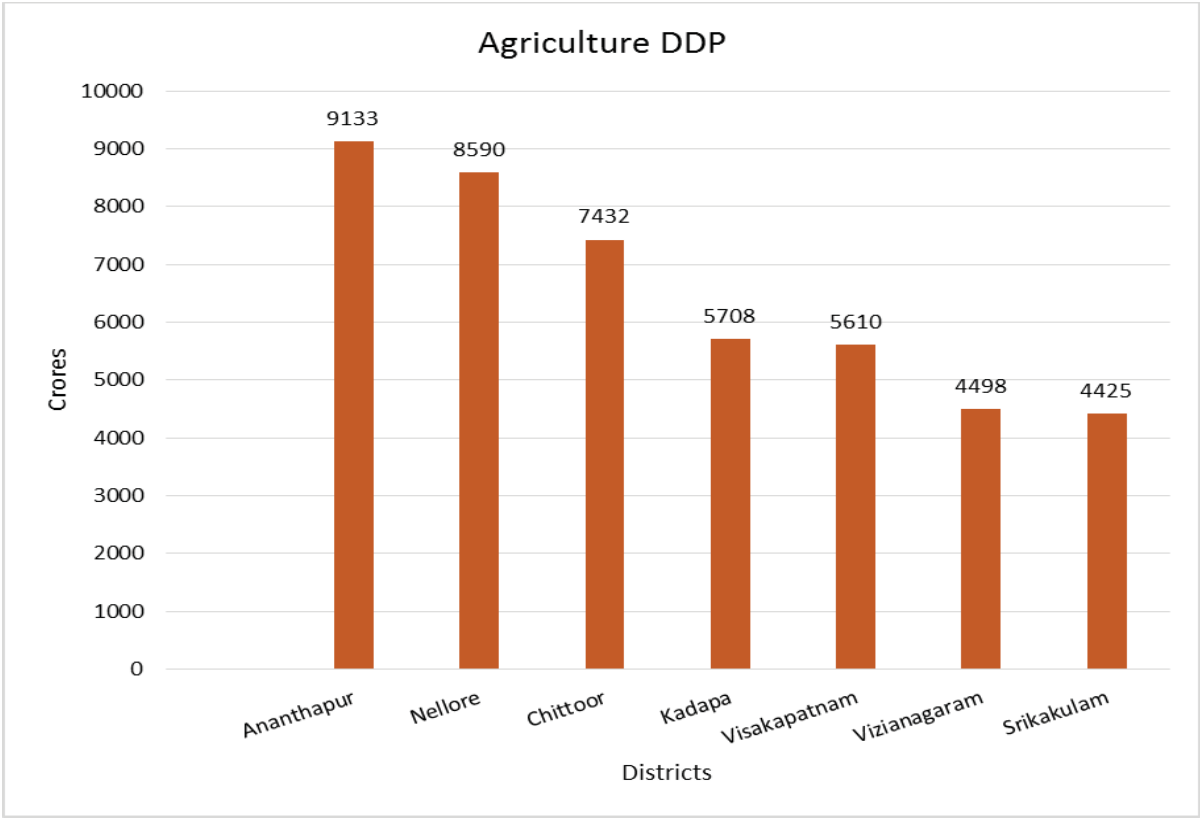
District Domestic Product



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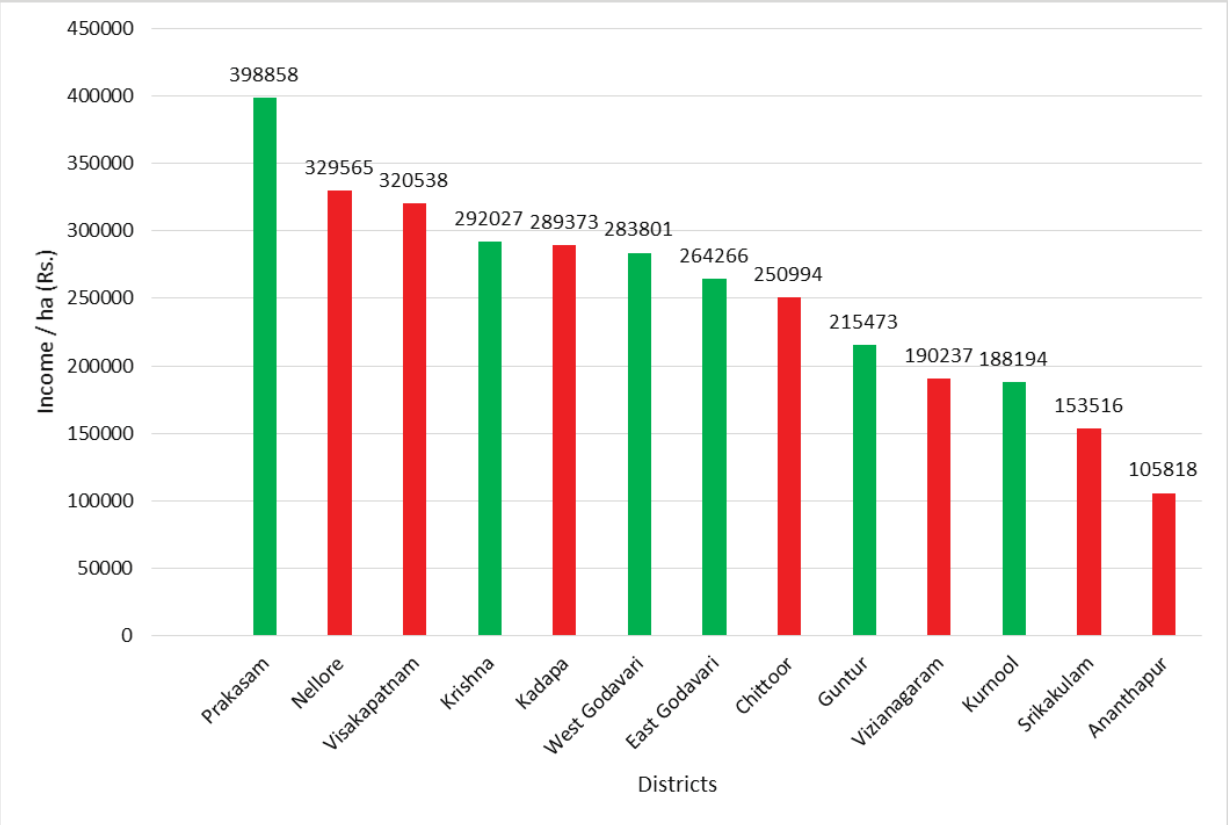
Income Per Ha



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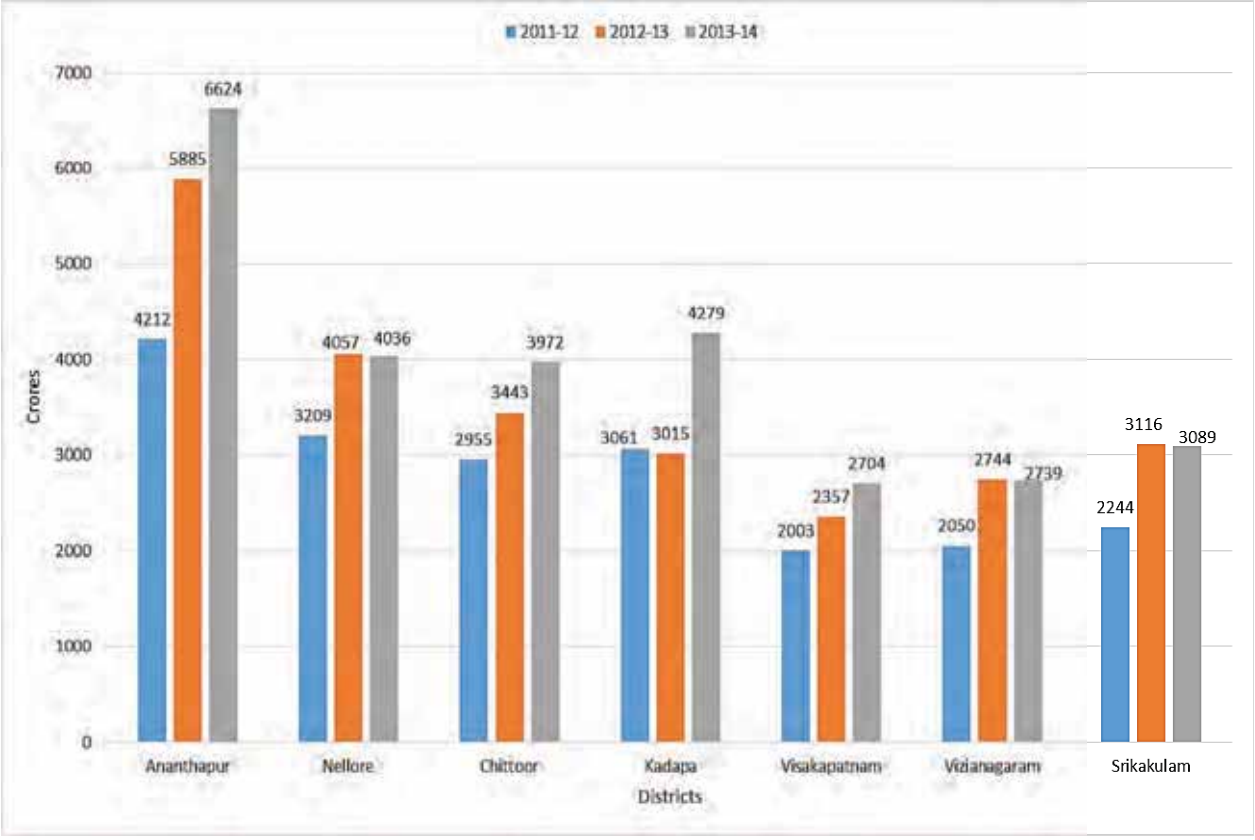
Agriculture DDP



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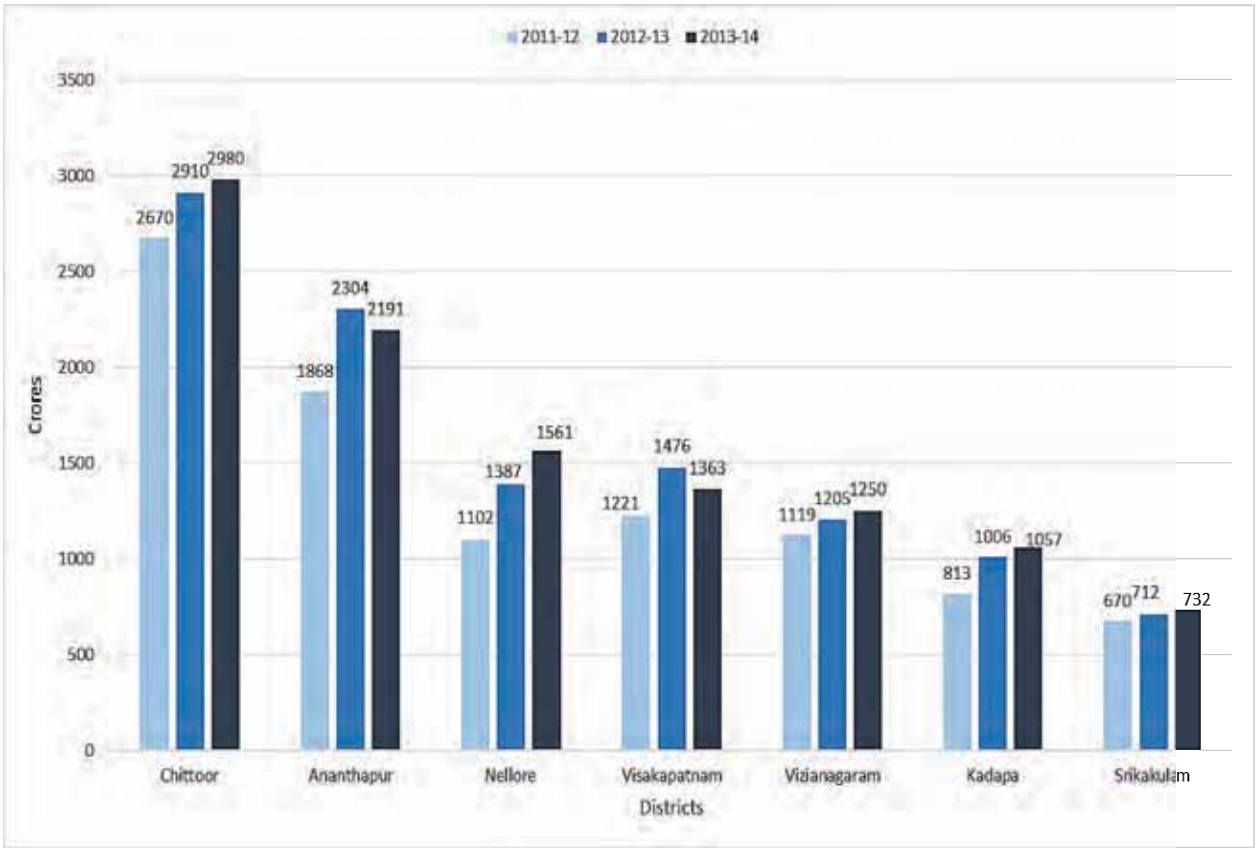
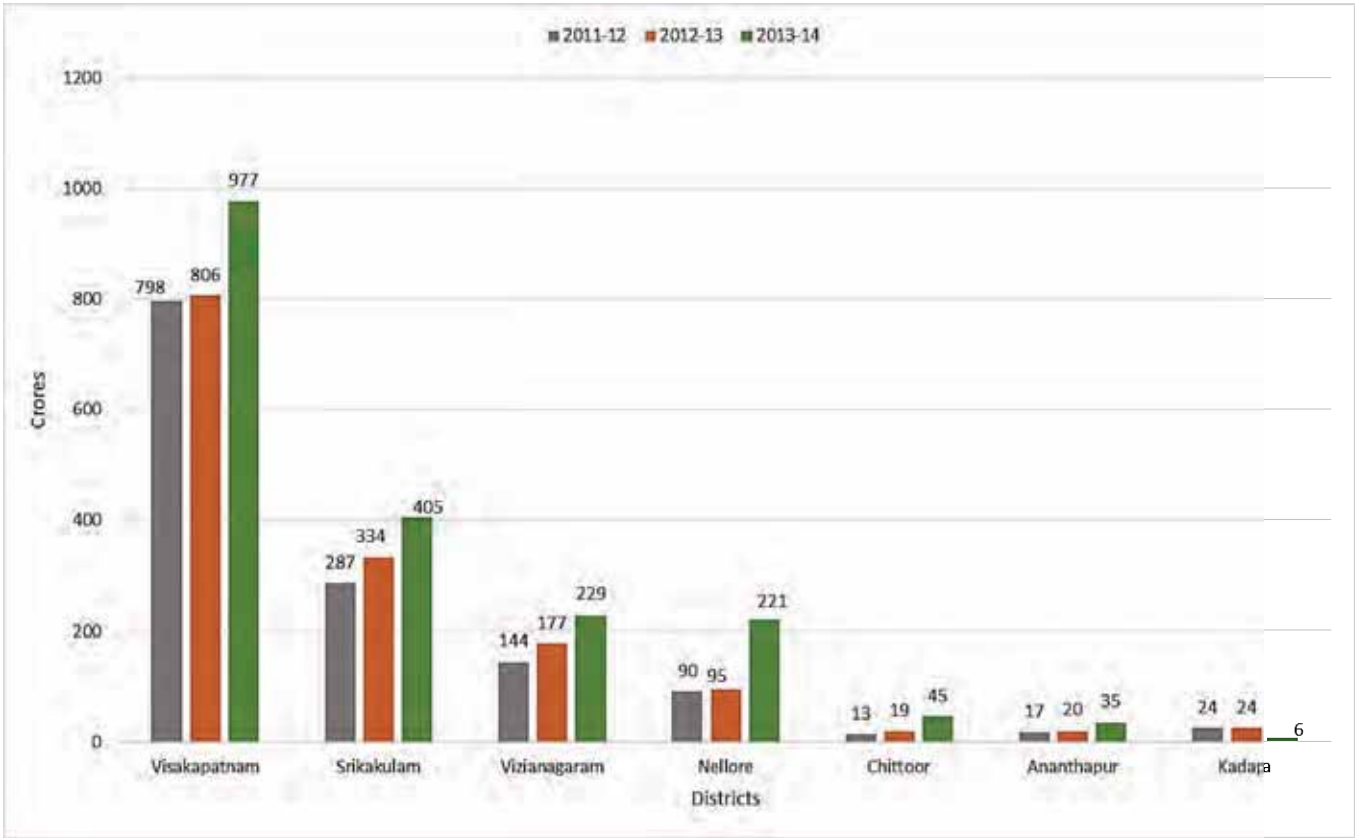
Livestock DDP



Fisheries DDP



Pvt. /NGOs Preference

S.No	1	2	3	4	5	6	7	8	9
	District	Agriculture	Horticulture	Livestock & Dairies	Fisheries	Marketing	Machineries / Farm Equipment	MIS/IT	Training
1	Anantapur	* Advanta India Ltd * AP State Seed * ALC India * ARANYA(NGO)-GMIS-"FARMANET" * Basix Krishi * Center for Good Governance * Genera Agri Corp Ltd. * Indian Institute Of Oilseeds Research * Monsanto India Region * Nuziveedu Seeds Pvt. Ltd.(P-1) * UPL Limited- Maize * UPL Maize * UPL Limited (Cotton)	* Basix Krishi * Vrutti Livelihoods Resource Centre * Indian Institute Of Oilseeds	* Advanta India Ltd * ALC India * Basix Krishi * UPL Fodder Bank	* CIFT * ICAR -Central Institute Of Fisheries Technology	* Marketing Department of AP * Vrutti Livelihoods Resource	* Advanta India Ltd * Mahindra & Mahindra * UPL Fodder Bank	* Center for Good Governance * Coromandel * ICAR -Central Institute Of Fisheries Technology	* ALC India * Vrutti Livelihoods Resource
2	Chittoor	* Advanta India Ltd * Basix Krishi * AP State Seed * Center for Good Governance	* Basix Krishi	* Advanta India Ltd * ACTECH Agro India * Basix Krishi * UPL Fodder Bank * NDDB	* CIFT * ICAR -Central Institute Of Fisheries Technology	* ACTECH Agro India	* Advanta India Ltd * Mahindra & Mahindra * UPL Fodder Bank	* ACTECH Agro India * NDDB * Center for Good Governance * ICAR -Central Institute Of Fisheries Technology	
3	Nellore	* AP State Seed * Basix Krishi * Bayer Crop Science Ltd. * Nagarjuna Fertilizers	* Basix Krishi * Bayer Crop Science Ltd.	* ACTECH Agro India * Advanta India Ltd * Basix Krishi * NDDB	* Bayer Crop Science Ltd. * CIFT * ICAR -Central Institute Of Fisheries Technology	* Bayer Crop Science Ltd. * ACTECH Agro India	* Advanta India Ltd * Mahindra & Mahindra	* ACTECH Agro India * NDDB * ICAR -Central Institute Of Fisheries Technology	* Bayer Crop Science Ltd. * Nagarjuna Fertilizers

Pvt. /NGOs Preference

S.No	1	2	3	4	5	6	7	8	9
	District	Agriculture	Horticulture	Livestock & Dairies	Fisheries	Marketing	Machineries / Farm Equipment	MIS/IT	Training
4	Srikakulam	* AP State Seed * ALC India * Basix Krishi * Center for Good Governance * Nuziveedu Seeds Pvt. Ltd.(P-2) * UPL Limited (Cotton)	* Basix Krishi	* Advanta India Ltd * Basix Krishi * UPL Fodder Bank	* CIFT * ICAR -Central Institute Of Fisheries Technology		* Advanta India Ltd * Mahindra & Mahindra * UPL Fodder Bank	* Center for Good Governance * Coromandel * ICAR -Central Institute Of Fisheries Technology	
5	Visakhapatnam	* AP State Seed * ALC India * Basix Krishi * Nuziveedu Seeds Pvt. Ltd.(P-2) * Nagarjuna Fertilizers	* Basix Krishi	* Advanta India Ltd * Basix Krishi * UPL Fodder Bank	* CIFT * ICAR -Central Institute Of Fisheries Technology		* Advanta India Ltd * Mahindra & Mahindra * UPL Fodder Bank	* ICAR -Central Institute Of Fisheries Technology	* Nagarjuna Fertilizers
6	Vizianagaram	* AP State Seed * ALC India * Basix Krishi * Center for Good Governance * Nuziveedu Seeds Pvt. Ltd.(P-2) * UPL Limited (Cotton) * Nagarjuna Fertilizers	* Basix Krishi	* Advanta India Ltd * Basix Krishi * UPL Fodder Bank	* CIFT * ICAR -Central Institute Of Fisheries Technology		* Advanta India Ltd * Mahindra & Mahindra * UPL Fodder Bank	* Center for Good Governance * ICAR -Central Institute Of Fisheries Technology	* Nagarjuna Fertilizers
7	YSR Kadapa	* Advanta India Ltd * AP State Seed * Basix Krishi * Genera Agri Corp Ltd. * Nagarjuna Fertilizers	* Basix Krishi * Vrutti Livelihoods Resource Centre	* ACTECH Agro India * Advanta India Ltd * Basix Krishi * UPL Fodder Bank	* CIFT * ICAR -Central Institute Of Fisheries Technology	* ACTECH Agro India * Vrutti Livelihoods Resource	* Advanta India Ltd * Mahindra & Mahindra * UPL Fodder Bank	* ACTECH Agro India * ICAR -Central Institute Of Fisheries Technology	* Vrutti Livelihoods Resource * Nagarjuna Fertilizers

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Cost Estimations

S.No	Sectors	1		2		3		4	5	
		Actech Agro India		Advanta India Ltd.		ALC India (Access Livelihoods Consulting India Pvt. Ltd.)		ARANYA(NGO) GMIS "FARMANET"	BASIX	
1	Districts	Chittoor Cuddapah Nellore		Rayalaseema(corn) All districts(Fodder , cotton)		Srikakulam Vizianagaram Visakapatnam Ananthapur Ananthapur	Agriculture Livestock	Anantapur	Entire state	
2	Cost (in Crores)	Particulars	Amount	Particulars	Amount	Finance requirement per FPO		2015 - 1350 farmers in 3 districts costs 0.27 Crores. By 3rd year for 4500 farmers costs 0.83 Crores.	Particulars	Amount
		Phase I-FPO Formation	2	Corn-Kharif	3	Dal Mill(2.5 TPH)	1.92		Year 1-Govt.	3.87
		Phase II-Tecnology	13.6	Corn-Tribal Area	1	Millets Processing Unit(2 TPH)	1.20		Farmer(10000 members)	4.5
		Phase III-Value addition	28.55	Fodder-Kharif	6	Organic Material	0.50	-	Basix Krishi	0.33
		Phase IV-Marketing	1	Fodder-Rabi	8	Seed Processing Unit	0.75		Year 1-Total	8.7
		Phase 5-Project Management	7.31	Fodder bank- Summer	13	Warehouse(2000 MT)	1.20		Year 2-Govt.	6.31
		Total Project Cost	52.46	Cotton-kharif	20	ICT Infrastructure	0.05		Farmer(25000 members)	11.25
		Particulars	Amount	Total	51	Procurement & Quality control	0.05		Basix Krishi	0.76
		Actech Share	9.46	UPL	25%	Total Investment	5.00		Year 2-Total	18.32
		Farmer share	3	Government	50%	Working capital (Rs crore/ annum by 3rd year)	12-15		Year 3-Govt.	11.22
		Govt share	25	Farmer	25%	Procurement of produce and training	6-8		Farmer(50000 Farmers)	22.5
		Term Loan	15			Processing	4-6		Basix Krishi	1.43
						Seed production & processing	3-5		Year 3-Total	35.15
		Total Project Cost	52.46			Input supply	2-3		Grand Total	62.17
						With Seed fund of 0.20 cr for 1 FPO and 0.18 cr to resource institution for promotion of 1 FPO, the above finance of 5 cr and 15 cr will be raised for the business of FPO				

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Cost Estimations

S.No	Sectors	6		7		8		9	10		11		12	
		Bayer Crop Science Ltd.		Coromandel		Genera Agri Corp Ltd.		Mahindra & Mahindra	Marketing Department AP		Monsanto India Region		National Dairy Development Board	
1	Districts	Nellore		Ananthapur Srikakulam Kurnool		Ananthapur Kadapa		All Districts, with Hubs in every 50 villages	Ananthapur		Ananthapur		Chittor Nellore	
2	Cost (in Crores)	Particulars	Amount	Particulars	Amount	Particulars	Amount	Subsidy on equipment cost	Particulars	Amount	Particulars	Amount	Particulars	Amount
		Farmer Group Formation	0.5	Total Cost	25	Mobilization, CB, FPO	10.8	Subsidy on Technology cost Approx. 100 Cr	Introduction of E-Tendering	14.1	Monsanto & Srinivasa (24%)	4.90	Production of high genetic merit (HGM) cattle and buffalo	297
		Training	2.5			Productivity Enhancement	9	Marketing Support	Strengthening of Rythu bazars	7	Government (46%)	9.34	Strengthening existing Semen Stations/ Starting new stations	259
		Tie up with partners	2	Service	Cost in Rs. Per Demo plat of 1ha	Farm implements, Machinery	Separate schemes	-	Creation of Ripening Chambers in Rythu Bazars	5	Farmer (30%)	5.98	Setting up a pilot model for viable doorstep AI delivery services	181
		Higher Yield (Rs.50000/group)	0.5	Soil Testing	500	Post harvest Infras	36		New Rythu Bazars	20			Scientific nutrition programme for milch animals	425
		Dryers installation and commissioning	41	Fertilizer Input application	8750	Value addition - Additional	18		Creation of scientific storage facilities	220			Village based milk procurement systems	747
		Project implementation, monitoring, administration	1.5	Micro Nutrients	3750	Certification	3.6		Total	266.1			ICT for MIS	59
		Data Monitoring	0.25	Field visits by MGC	3750	Marketing Solution	18						Learning and Evaluation	73
		Packaging and branding	0.25	Farmer Training	750	Project Management	7.2						Grand Total	2042
		Market	1.5	Field Days	7500	Total	102.6							
		Total	50	Total Cost	25000									

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Cost Estimations

S.No	Sectors	13		14		15		16		17	
		Nuziveedu Seeds 1. High Density Planting and mechanization in Cotton		Nuziveedu Seeds 2. Promotion of new improved Varieties to strengthen Rice economy of Andhra Pradesh in PPP.		UPL Fodder Bank		UPL Limited		Vrutti Livelihoods Resource Centre	
1	Districts	Anantapur		Vizianagaram Visakhapatnam Srikakulum		Ananthapur Srikakulam Kadapa Chittoor Vizianagaram Visakapatnam		Srikakulam	Palkonda(2000 ha) Rajam(1000 ha)	Ananthapur	Putluru, Peda Pappuru, Narpala, Yaadiki
								Vizianagaram	Nandigama(2000 ha)	Kadapa	Pulivendula, Sumhadripur, Rajampeta, Railway Kodur
								Ananthapur	Parvathipuram(2000 ha)		
2	Cost (in Crores)	Particulars	Amount	Particulars	Amount	Expected Subsidy	6 (75%)	Company	2.48 (28%)	Particulars	Amount
		Cultivation expenses	52.54	Cultivation expenses	4.10	Total	8	Government	3.15 (36%)	Mobilization, CB, FPO (Rs. 6000/ farmer)	10.80
		General extension services	0.29	Sub-Total	4.10	Giveback to Govt. in 5 yrs	5.97	Farmer	3.15 (36%)	Productivity Enhancement (Rs. 5000/ farmer)	9.00
		Sub-Total	52.83	FFS	0.00	-		Total	8.80	Farm implements, Machinery	Separate schemes
		FFS-cultivation expenses	1.78	Administration/Project mgmt cost	0.03			-		Post harvest Infras (Rs. 20000/ farmer)	36.00
		FFS-extension	0.52	Total (for 400 ha)	4.14					Value addition - Additional (Rs. 10000/ farmer)	18.00
		Sub-Total	2.30	% share	0.00					Certification (Rs. 2000/ farmer)	3.60
		Administration/Project mgmt cost	1.68	Year-2 (for 5000 ha)	51.39					Marketing Solution (Rs. 10000/ farmer)	18.00
		Total	56.81	Year-3 (for 10000 ha)	102.78					Project Management (Rs. 4000/ farmer)	7.20
		% share	0.00	Total	158.30					Total	102.60
		Year-2	71.01	The Government and NSL shall share the subsidy in a proportion of 80:20 respectively with respect to seeds						-	
		Year-3	85.21								
		Total	213.02								

Cost Estimations

S.No	Sectors	18	19	20	21	22	23
		A.P. State Seed Certification Agency	Center for Good Governance	Central Institute Of Fisheries Technology	Indian Institute Of Oilseeds Research	Nagarjuna Fertilizers & Chemicals Ltd.	UPL Limited Enhancing The Productivity Of Maize In Andghra Pradesh Under PPP Mode
1	Districts	13 districts	West Godavari Vijayanagaram Srikakulam Chittoor Anantapur	Entire state Interested in establishment of fishing harbour in Nellore district, Uppada, Vadalarevu and Nizampatnam	Ananthapur	Cuddapah Nellore Vizianagaram Vishakapatnam	Ananthapur
2	Cost (in Crores)						

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Day 2: Activity Plan – Pilot Sites

Girish: Micronutrient Activity Plan

Soil Fertility Management

(Team Building and Planning Workshop, ICRISAT, Patancheru, Telangana state, India/25 March 2015)

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Soil fertility management - Why

- Soil fertility degradation – a major stumbling block for enhancing productivity and incomes
- Imbalanced and uneconomic fertilizer use
- Low fertilizer use efficiency
- Low hanging fruit for AP Mission
- Produce quality
- Threat for sustainability
- Ecosystem services

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Soil fertility management interventions

How?

- Soil test-based basal application of fertilizers including secondary- and micro- nutrients (**25% or more area during kharif season in each district**)
  - ➢ Mandal wise recommendations
  - ➢ Principle to recommend full dose if >50% deficiency; half dose if 25%-50% deficiency and 1/4th dose if <25% deficiency.
  - ➢ Options foe secondary- and micro- nutrients – either recommended quantities for once in 2 years or half of recommended quantity every year
- Foliar application of agribor and zinc sulphate where basal application is missed in targeted 25% area
- Aerobic composting or vermicomposting in pilot sites – 100 or more units as pilot
- Biofertilizers use – 100 or more farmers as pilot

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Soil Fertility Management - timelines

S. No.	Sub-activity	Timeline
1	Soil fertility management options detailing	31st March 2015
2	Working out requirement for microbial culture (Madhyam, Excel) & earthworms for aerobic composting and vermicomposting; and identing	By 5th April 2015
3	Input mobilization and initiating aerobic composting and vermicomposting activities	By 15 April 2015
4	Working out soil test-based requirement of macro- & micro- nutrient fertilizers for major rainy season crops at mandal-level (yearly dose for secondary- & micro-nutrients)	By 20th May 2015
5	Working out month wise requirement based on crop sowing	By 25th May 2015
6	Indenting for June month requirement of fertilizers (including biofertilizers)	By 25th May 2015
7	Placement of inputs at respective places	By 30th May 2015
8	Registration of participating farmers	1st June 2015 onwards
9	Fertilizer input distribution & basal application of balanced chemical fertilizers +biofertilizers	1st June 2015 onwards
10	Integrated use thru vermicompost/aerobic compost along with chemical fertilizers +biofertilizers (mainly in vegetable or major crops otherwise)	15th June onwards
11	Indenting for July month requirement of fertilizers (including agribor and biofertilizers)	By 15th June 2015
12	Foliar spray of zinc sulphate and agribor (where basal application is missed)	1st July 2015 onwards
13	Crop cutting experiments - Improved practice vs traditional practice	September onwards

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Soil Fertility Management - responsibilities

Roles & Responsibility chart

S. No.	Sub-activity	Activity coordinator	District coordinator	Line department
1	Soil fertility management options detailing	Girish (Responsible)	-	-
2	Working out requirement for microbial culture (Madhyam, Excel) & earthworms for aerobic composting and vermicomposting; and identing	Girish (Responsible)	CS Pawar, Narsimha, Pardhasaradhi, Gajanan, Rajesh, Pathak, Sudi, Ch S Rao, Jangawad, KK Garg (Consulting)	-
3	Input mobilization and initiating aerobic composting and vermicomposting activities	Girish (Consulting)	CS Pawar, Narsimha, Pardhasaradhi, Gajanan, Rajesh, Pathak, Sudi, Ch S Rao, Jangawad, KK Garg (Responsible/Accountable)	-
4	Working out soil test-based requirement of macro- & micro- nutrient fertilizers for major rainy season crops at mandal-level (yearly dose for secondary- & micro-nutrients)	Girish (Consulting)	CS Pawar, Narsimha, Pardhasaradhi, Gajanan, Rajesh, Pathak, Sudi, Ch S Rao, Jangawad, KK Garg (Responsible/Accountable)	-
5	Working out month wise requirement based on crop sowing	Girish (Consulting)	CS Pawar, Narsimha, Pardhasaradhi, Gajanan, Rajesh, Pathak, Sudi, Ch S Rao, Jangawad, KK Garg (Responsible/Accountable)	-
6	Indenting for June month requirement of fertilizers (including biofertilizers)	Girish (to be informed)	CS Pawar, Narsimha, Pardhasaradhi, Gajanan, Rajesh, Pathak, Sudi, Ch S Rao, Jangawad, KK Garg (Responsible)	DoA (Accountable)
7	Placement of inputs at respective places	Girish (to be informed)	CS Pawar, Narsimha, Pardhasaradhi, Gajanan, Rajesh, Pathak, Sudi, Ch S Rao, Jangawad, KK Garg (Responsible)	DoA (Accountable)
8	Registration of participating farmers	Girish (to be informed)	CS Pawar, Narsimha, Pardhasaradhi, Gajanan, Rajesh, Pathak, Sudi, Ch S Rao, Jangawad, KK Garg (Responsible)	DoA (Accountable)
9	Fertilizer input distribution & basal application of balanced chemical fertilizers +biofertilizers	Girish (to be informed/Consulting)	CS Pawar, Narsimha, Pardhasaradhi, Gajanan, Rajesh, Pathak, Sudi, Ch S Rao, Jangawad, KK Garg (Responsible)	DoA (Accountable)
10	Integrated use thru vermicompost/aerobic compost along with chemical fertilizers +biofertilizers (mainly in vegetable or major crops otherwise)	Girish (to be informed/Consulting)	CS Pawar, Narsimha, Pardhasaradhi, Gajanan, Rajesh, Pathak, Sudi, Ch S Rao, Jangawad, KK Garg (Accountable/Responsible)	DoA (Responsible)
11	Indenting for July month requirement of fertilizers (including agribor and biofertilizers)	Girish (to be informed)	CS Pawar, Narsimha, Pardhasaradhi, Gajanan, Rajesh, Pathak, Sudi, Ch S Rao, Jangawad, KK Garg (Responsible)	DoA (Accountable)
12	Foliar spray of zinc sulphate and agribor (where basal application is missed)	Girish (to be informed/consulting)	CS Pawar, Narsimha, Pardhasaradhi, Gajanan, Rajesh, Pathak, Sudi, Ch S Rao, Jangawad, KK Garg (Accountable/Responsible)	DoA (Responsible)
13	Crop cutting experiments - Improved practice vs traditional practice	Girish (to be informed/consulting)	CS Pawar, Narsimha, Pardhasaradhi, Gajanan, Rajesh, Pathak, Sudi, Ch S Rao, Jangawad, KK Garg (Accountable/Responsible)	DoA (Responsible)

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Outputs & Outcomes

- Increase in productivity and net returns with soil test-based application of fertilizers (by 20% with participating farmers).
- Decrease in the use of urea/DAP/muriate of potash using soil test based soil fertility management(by 10% with participating farmers).
- Enhanced fertilizer use efficiency through integrated use of inorganic, organic and biological fertilizers (by 20%).

Measurable indicators

1. Crop yields: increase by 20% or more
2. Incomes: increase by 20% or more
3. Cost & quantity of chemical fertilizers: 10% decrease in cost and consumption of urea/DAP/MOP
4. Soil fertility: improvement in soil C and essential nutrients balances

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Thank you!

CGIAR

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Department-wise Revised Plans

Technological interventions in Rice

Intervention	Area (lak.ha)	Districts	units required	Inputs required
New vareities (MTU- 1075, MTU-1064, BPT-2231, BPT-2270, NLR-3041, RGL- 11414)	1.5	All districts		
Direct seeding of rice				
Dry method -tractor drawn seed drill	3	Guntur, Krishna, Prakasam, Srikakulam, Vizayanagaram	1600	weedicides (2 doses), campaigns
Wet Method - Drum seeded	0.5	West and East Godavari	1700	Weedicide (1 dose), campaigns
Machine transplantation	0.5	Krishna, Guntur, west Godavari, Nellore	500	campaigns
Alternate wetting and drying	3	Krishna, Guntur, East and west Godavari, Prakasam		Campaigns
Micro Nutrient	8	13 districts		campaigns

Maize

Intervention	Area (lak.ha)	Districts	Constraints
Area expansion	6.73	All districts	Marketing of produce
Zero tillage	1	Guntur and Krishna	
Micro Nutrients	4	All districts	

Productivity = 6255, 6624 kg/ha
Production = 18.83, 44.58 lakh Tons
GVA = Rs.2467, 6018 cr

Cotton

Intervention	Area (lak.ha)	Districts
High density planting	0.03	GNT
Micro nutrient	2	SKM, VZM, EG, WG, KR, GNT, PKM, KNL, ATP

Productivity = 589, 650 kg/ha (lint)
Production = 28.24, 31.66 lakh bales
GVA = Rs. 5763, 6461cr

Groundnut

Intervention	Area (lak.ha)	Districts
Drought tolerant Varieties (K6, K9, Dharani, Anantha)	3.35	Rayalaseema, SKM, VZM, PKM, NLR
Micro nutrient	5	Rayalaseema, SKM, VZM, PKM, NLR
Protective irrigation	1	Rayalaseema

Productivity = 601, 774 kg/ha
Production = 4.98, 8.42 lakh Tons
GVA = Rs. 1992, 3364 cr

Name Of The Department: Animal Husbandry and Dairy Development																				
S.No	District Name	Milk/Meat/Egg	Activity	Unit of Measurement	Physical Target 2015-16					Estimated Production					Output Value in Rs.Crores				Total
					Q1	Q2	Q3	Q4	Total	Q1	Q2	Q3	Q4	Total	Q1	Q2	Q3	Q4	
	1	2	3		4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1	AP TOTAL	Milk	**1. Breed Development**																
			1.1 Sexed Semen / Embryos - JERSEY / HF	No. of Doses	0	2000	5000	2000	9000	0	0	0	0	0	0	0	0	0	0
			1.2 Sexed Semen / Embryos - Indegenous	No. of Doses	0	0	0	30	30	0	0	0	0	0	0	0	0	0	0
			1.3 Establishment of ET / Sexed Semen Laboratory at Nekarikal, Guntur under PPP	Number	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0
			1.4 Covering Additional Breeding Stock thro NGO	Lakh No. of Animals	0	1	2	2	5										
			1.5 Pending Payments to JKT	Lakh Rupees	0	0	0	0	0										
			1.6 Breed Develoment with Indegenous Breeds						0										
			1.7 Semen Doses Production	Lakh Numbers					0										
									0										
			2. Feed and Fodder Development						0										
			2.1 Fodder Production thro PPP	No. of Acres					0										
			2.2 Fodder Production thro Buy Back	No. of Acres	150	400	350	100	1000										
			2.3 Hydroponic Units		5	5	15	15	40										
			2.4 Conservation thro Balers	Number	1	1	1	0	3										
			2.5 Conservation thro Chaffers	Number					0										
			2.6 Conservation thro Silo	Number					0										
			2.7 Fodder Banks	Number	1	1	1	0	3										
			2.8 Fodder supplied in adverse conditions	Lakh Farmers benefitted	1	0	0	0	1										
			2.9 Feed supplied in adverse conditions						0										
			2.10 Pending Payments to Fodder suppliers						0										
			2.11 New Feed Mixing Plants thro PPP	Number	1	1	1	0	3										
									0										
			3. Management						0										
			3.1 Ksheera Sagar	No. of Pregnant Animals	3000	3500	3500	3000	13000										
			3.2 Establishment of Animal Hostel	Number	1	2	2	0	5										
			3.3 Sunandini (General)	No. of Female Calves	10000	10000	10000	2000	32000										
			3.3 Sunandini (SCSP)						0										
			3.4 Suphalam	No. of Infertile Animals	3000	6000	2400	0	11400										
			3.5 Animal Health Camps in JBMV Program	Number of Camps	500	6000	6000	1200	13700										
									0										

AP Primary Sector
District Crop/Activity Plan

Name Of The Department: Animal Husbandry and Dairy Development														
S.No	District Name	Milk/Meat/Egg	Activity	Production during 2014-15	Output Value during 2014-15	% Growth over 2014-15		Role of NGOs/ Pvt/ FPOs	Amount Budget (Rs. Crores)				
						Prodn	Output Value		Q1	Q2	Q3	Q4	Total
	1	2	3	19	20	21	22	23	24	25	26	27	28
1	AP TOTAL	Milk	**1. Breed Development**										
			1.1 Sexed Semen / Embryos - JERSEY / HF	0	0	0	0	NGO	0	22	55	22	99
			1.2 Sexed Semen / Embryos - Indegenous	0	0	0	0	NGO	0	0	0	0.9	0.9
			1.3 Establishment of ET / Sexed Semen Laboratory at Nekarikal, Guntur under PPP	0	0	0	0	NGO/Pvt	0	0	100	0	100
			1.4 Covering Additional Breeding Stock thro NGO										
			1.5 Pending Payments to JKT										
			1.6 Breed Develoment with Indegenous Breeds										
			1.7 Semen Doses Production										
			2. Feed and Fodder Development										
			2.1 Fodder Production thro PPP										
			2.2 Fodder Production thro Buy Back										
			2.3 Hydroponic Units										
			2.4 Conservation thro Balers										
			2.5 Conservation thro Chaffers										
			2.6 Conservation thro Silo										
			2.7 Fodder Banks										
			2.8 Fodder supplied in adverse conditions										
			2.9 Feed supplied in adverse conditions										
			2.10 Pending Payments to Fodder suppliers										
			2.11 New Feed Mixing Plants thro PPP										
			3. Management										
			3.1 Ksheera Sagar										
			3.2 Establishment of Animal Hostel										
			3.3 Sunandini (General)										
			3.3 Sunandini (SCSP)										
			3.4 Suphalam										
			3.5 Animal Health Camps in JBMV Program										

Name Of The Department: Animal Husbandry and Dairy Development																				
S.No	District Name	Milk/Meat/Egg	Activity	Unit of Measurement	Physical Target 2015-16					Estimated Production					Output Value in Rs.Crores				Total
					Q1	Q2	Q3	Q4	Total	Q1	Q2	Q3	Q4	Total	Q1	Q2	Q3	Q4	
	1	2	3		4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1	AP TOTAL	Milk	**4. Livestock Health Care**						0										
			4.1 Curative Treatment	Lakh Animals					0										
			4.2 Preventive Treatment (Dewormings)						0										
			4.3 Preventive Vaccinations	Lakh Animals	200	200	150	50	600										
			4.4 Animals Inseminated						0										
			4.4 Artificial Inseminations done						0										
			4.5 Calves Born						0										
			4.6 Fodder Development (Annuals)						0										
			4.7 Fodder Development (Perennials)						0										
			4.8 Pasu Vignana Sadassulu						0										
			4.9 HRD Trainings						0										
			4.10 Monthly Seminars conducted						0										
			4.10 NADRS						0										
									0										
			5. Infra Structure Development						0										
			5.1 Veterinary Institutions renovated	Number of Vety Institutions	0	250	500	228	978										
									0										
			6. MIS						0										
			6.1 Veterinary Institutions networking	Number of Vety Institutions	0	1500	0	0	1500										
			6.2 DPR preparation & Administrative Cost	Number of Projects	10	0	0	0	10										
			6.3 Hiring of Consultants						0										
									0										
			7. Capacity Building						0										
			7.1 Departmental Staff						0										
			7.2 Farmers	Number of Farmers	1500	3000	3000	2500	10000										
									0										
			8. Centrally Assisted State Plan Schemes						0										
			8.1 NLH & DC						0										
			8.2 NLMP						0										
			8.3 NPBB						0										
			8.4 NPDD						0										
			8.5 Survey Schemes						0										
									0										

AP Primary Sector
District Crop/Activity Plan

Name Of The Department: Animal Husbandry and Dairy Development														
S.No	District Name	Milk/Meat/Egg	Activity	Production during 2014-15	Output Value during 2014-15	% Growth over 2014-15		Role of NGOs/ Pvt/ FPOs	Amount Budget (Rs. Crores)				
						Prodn	Output Value		Q1	Q2	Q3	Q4	Total
	1	2	3	19	20	21	22	23	24	25	26	27	28
1	AP TOTAL	Milk	**4. Livestock Health Care**										
			4.1 Curative Treatment										
			4.2 Preventive Treatment (Dewormings)										
			4.3 Preventive Vaccinations										
			4.4 Animals Inseminated										
			4.4 Artificial Inseminations done										
			4.5 Calves Born										
			4.6 Fodder Development (Annuals)										
			4.7 Fodder Development (Perennials)										
			4.8 Pasu Vignana Sadassulu										
			4.9 HRD Trainings										
			4.10 Monthly Seminars conducted										
			4.10 NADRS										
			5. Infra Structure Development										
			5.1 Veterinary Institutions renovated										
			6. MIS										
			6.1 Veterinary Institutions networking										
			6.2 DPR preparation & Administrative Cost										
			6.3 Hiring of Consultants										
			7. Capacity Building										
			7.1 Departmental Staff										
			7.2 Farmers										
			8. Centrally Assisted State Plan Schemes										
			8.1 NLH & DC										
			8.2 NLMP										
			8.3 NPBB										
			8.4 NPDD										
			8.5 Survey Schemes										

AP Primary Sector
District Crop/Activity Plan

Name Of The Department: Animal Husbandry and Dairy Development																			
S.No	District Name	Milk/Meat/Egg	Activity	Unit of Measurement	Physical Target 2015-16					Estimated Production					Output Value in Rs.Crores				Total
					Q1	Q2	Q3	Q4	Total	Q1	Q2	Q3	Q4	Total	Q1	Q2	Q3	Q4	
	1	2	3		4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1	AP TOTAL	Milk	**9. Milk Marketing**						0										
			9.1 Milk Procurement	Litres per Day					0										
			9.2 Milk Sales	Litres per Day					0										
			9.3 Village Coverage						0										
			9.4 Milk Pourers						0										
			9.5 Mega Dairy Plant	Number	0	0	0	1	1										
			9.6 Establishment of By Product Units	Number	0	0	4	2	6										
			9.6 Bulk Milk Cooling Units thro PPP	Number	0	0	5	5	10										
									0										
			10. Strategies for Stimulated Growth						0										
			9.1 Animals yielding more than 6 Lit per day	Lakh Numbers					0										
			9.2 Big Dairy Farmers producing > 200 Litres per Day						0										
			9.3 Heifers identified						0										
			9.4 Female Calves identified						0										
			9.5 Dairy FPO / SHG Members identified						0										
		Meat	1. Breed Development						0										
			1.1 Sheep Distributed in Tribal Areas	No. of Farmers	50	300	350	160	860										
			1.2 Exchange of Breeding Rams						0										
			1.3 Meat Outlets	Number	0	0	1	0	1										
			1.4 Chicken Breast processing Units	Number	0	0	1	0	1										
			1.4 Meat Processing Units for Sheep and Goat	Number	0	0	1	0	1										
			1.5 Mobile Sheep Health Care Units	Number	0	2	3	0	5										
			1.5 Modern Slaughter House thro PPP	Number	0	0	1	0	1										
			1.7 Export Oriented Unit for Beef	Number	0	0	1	0	1										
			1.7 Export Oriented Unit for Pork						0										
		Egg	Backyard Poultry Units distribution						0										
			Egg Powder Plant	Number	0	0	1	0	1										
			Vaccination of Rural Poultry Birds						0										
			Cold Storage Facility for eggs	Number	0	0	1	0	1										
			Calf Rearing Program	No. of Calves enrolled															
			Health Care																
			Feed and Fodder Devt																
			Awareness																
			Credit Facility																
			Procurement																

AP Primary Sector
District Crop/Activity Plan

Name Of The Department: Animal Husbandry and Dairy Development														
S.No	District Name	Milk/Meat/Egg	Activity	Production during 2014-15	Output Value during 2014-15	% Growth over 2014-15		Role of NGOs/ Pvt/ FPOs	Amount Budget (Rs. Crores)				
						Prodn	Output Value		Q1	Q2	Q3	Q4	Total
	1	2	3	19	20	21	22	23	24	25	26	27	28
1	AP TOTAL	Milk	**9. Milk Marketing**										
			9.1 Milk Procurement										
			9.2 Milk Sales										
			9.3 Village Coverage										
			9.4 Milk Pourers										
			9.5 Mega Dairy Plant										
			9.6 Establishment of By Product Units										
			9.6 Bulk Milk Cooling Units thro PPP										
			10. Strategies for Stimulated Growth										
			9.1 Animals yielding more than 6 Lit per day										
			9.2 Big Dairy Farmers producing > 200 Litres per Day										
			9.3 Heifers identified										
			9.4 Female Calves identified										
			9.5 Dairy FPO / SHG Members identified										
		Meat	1. Breed Development										
			1.1 Sheep Distributed in Tribal Areas										
			1.2 Exchange of Breeding Rams										
			1.3 Meat Outlets										
			1.4 Chicken Breast processing Units										
			1.4 Meat Processing Units for Sheep and Goat										
			1.5 Mobile Sheep Health Care Units										
			1.5 Modern Slaughter House thro PPP										
			1.7 Export Oriented Unit for Beef										
			1.7 Export Oriented Unit for Pork										
		Egg	Backyard Poultry Units distribution										
			Egg Powder Plant										
			Vaccination of Rural Poultry Birds										
			Cold Storage Facility for eggs										
			Calf Rearing Program										
			Health Care										
			Feed and Fodder Devt										
			Awareness										
			Credit Facility										
			Procurement										

Welcome

to

DELEGATES OF PRIMARY SECTOR MISSION

PRESENTATION OF HORTICULTURE GROUP

List of Horticulture Group Members

Harinath Reddy CB, DoH
Ratnacharyulu, DoH
Bindumadhava. H, AVRDC
Ramakrishna Nair, AVRDC
Gajanan Sawargaonkar, ICRISAT
Anitha Chitturi, ICRISAT
Mukund Patil, ICRISAT
Srinivas K, ICRISAT
Shanti, ICRISAT
Lakshmi J, ICRISAT

TARGETTED GVA AND PRODUCTION FOR 2015-16 AT CURRENT PRICES

Horticulture	2013-14		2014-15		2015-16	
	GVA (in Crores)	Prod. (in '000 MTs)	GVA (in Crores)	Prod. (in '000 MTs)	GVA (in Crores)	Prod. (in '000 MTs)
Growth Engines						
1.Chillies	3855	602	3767	524	5300	1060
2.Banana	3717	1888	6727	2870	8200	4500
3.Mango	3248	2737	3435	2886	4377	3648
4.Batavia	1037	1331	1176	1331	1411	1176
5.Cashewnut	716	88	814	90	1196	120
6.Tomato	5037	3354	3589	2400	8036	6680
7.Oil Palm	604	930	696	1024	1575	2100
8.Lemon	974	582	1382	583	1570	631
9.Papaya	1480	1545	1220	1488	2052	1710
8.Others	13449		22109		19272	
TOTAL	33513		35417		50003	
INCREMENT IN GSDP			1904		14586	
BUDGET (Rs. in Crore)			219		310	

District wise targeted (GVA)in addition to business as usual for 2015-16 (value in crores)

S.No	District	Value (Crores)
1	East Godavari	4546
2	Guntur	3917
3	Ananthapur	3335
4	Kadapa	2054
5	West Godavari	1826
6	Chittoor	1689
7	Kurnool	1531
8	Visakapatnam	1458
9	Krishna	1351
10	Srikakulam	1330
11	Vizianagaram	1040
12	Prakasam	1021
13	Nellore	849
	Grand Total	25947

Crop wise targeted (GVA)in addition to business as usual for 2015-16 (value in crores)

S.No	Crop	Value (Crores)
1	Chillies	4830.00
2	Cashew	4367.40
3	Banana	3729.18
4	Mango	2862.00
5	Tomato	2251.20
6	Coconut	1900.70
7	Sweet orange	1368.00
8	Oilpalm	1152.75
9	Papaya	878.40
10	Turmeric	755.00
11	Brinjal	678.00
12	Onion	664.80
13	Lime	510.00
	Total	25947.43

District wise and Crop wise break-up

Sno	Crop	Area	Production	Value in Crores	District
1	Banana	16893	5.91	1075.62	East Godavari
		15685	5.49	999.18	Kadapa
		9760	3.42	622.44	Ananthapur
		6932	2.43	442.26	Guntur
		5819	2.05	373.10	Kurnool
		1732	0.6	109.20	Krishna
		1698	0.59	107.38	Chittoor
2	Brinjal	13433	2.68	536.00	East Godavari
		1987	0.4	80.00	Ananthapur
		1575	0.31	62.00	Vizianagaram
3	Cashew	31758	0.32	38.40	East Godavari
		33989	0.21	25.20	Visakhapatnam
		25230	0.14	16.80	Srikakulam
		18179	0.11	13.20	Vizianagaram
		19231	0.09	10.80	West Godavari

Sno	Crop	Area	Production	Value in Crores	District
4	Chillies	127722	5.75	2875.00	Guntur
		25484	1.15	575.00	Prakasam
		4325	1.08	540.00	Ananthapur
		1900	0.85	425.00	Krishna
		7453	0.33	165.00	West Godavari
		6953	0.31	155.00	Srikakulam
		4421	0.19	95.00	Nellore
5	Coconut	49270	7390	886.80	East Godavari
		20652	3097	371.64	West Godavari
		18645	2796	335.52	Srikakulam
		8700	1305	156.60	Visakhapatnam
		8300	1245	149.40	Vizianagaram
		4090	6.13	0.74	Krishna

Crop wise break-up Contd..

Sno	Crop	Area	Production	Value in Crores	District
6	Lime	17000	2.55	510.00	Nellore
7	Mango	73527	6.62	794.40	Chittoor
		64770	5.83	699.60	Krishna
		39738	3.58	429.60	Ananthapur
		24000	2.16	259.20	Kadapa
		18433	1.66	199.20	East Godavari
		12130	1.09	130.80	Nellore
		10041	0.9	108.00	Srikakulam
		9583	0.86	103.20	Kurnool
		7097	0.63	75.60	Prakasam
		5870	0.52	62.40	Visakhapatnam
8	Oilpalm	71420	8.21	615.75	West Godavari
		28102	3.23	242.25	East Godavari
		13481	1.55	116.25	Krishna
		10476	1.2	90.00	Vizianagaram
		6965	0.8	60.00	Visakapatnam
		3341	0.38	28.50	Srikakulam

Sno	Crop	Area	Production	Value in Crores	District
9	Onion	14466	2.61	313.20	Kurnool
		8930	1.6	192.00	Chittoor
		4735	0.85	102.00	Kadapa
		1478	0.26	31.20	Guntur
		1229	0.22	26.40	Vizianagaram
10	Papaya	7893	6.31	757.20	Ananthapur
		1252	1.01	121.20	Chittoor
11	Sweet orange	55905	7.55	906.00	Ananthapur
		18374	2.48	297.60	Prakasam
		10120	1.37	164.40	Kadapa

Crop wise break-up Contd..

Sno	Crop	Area	Production	Value in Crores	District
12	Tomato	22149	4.43	531.60	Kurnool
		19727	3.95	474.00	Chittoor
		15755	3.16	379.20	Kadapa
		12464	2.49	298.80	Guntur
		9268	1.85	222.00	West Godavari
		66677	1.33	159.60	Vizianagaram
		4735	0.94	112.80	Nellore
		3054	0.61	73.20	Prakasam
13	Turmeric	8975	0.54	270.00	Guntur
		7012	0.42	210.00	Kurnool
		5012	0.3	150.00	Kadapa
		4181	0.25	125.00	Visakapatnam

BEST PRACTICES TO ENHANCE PRODUCTIVITY

Sl. No	Name of the crop	Present productivity (MT / Ha)	Expected productivity (MT / Ha)	Best Practices
1	Mango	9	12	High density plantation, rejuvenation, canopy management, topworking and micro irrigation and fertigation, Soil and leaf analysis
2	Banana	35	50	Use of tissue culture saplings,staking ,IPN/INM and microirrigation and fertigation
3	Papaya	80	100	Usage of gynodioecious lines (Red lady, Surya), IPM/INM, micro irrigation and fertigation
4	Sweet Orange	15	18	Promotion of budlings grafted on rangapurlime,use of certified budwood material,rejuvenation, INM/IPM, micro irrigation
5	Pomegranate	15	20	Use of high yielding varieties, IPM/INM, drip irrigation, mulching, high density plantation
6	Cashew	0.8	1.10	Usage of grafts and high yielding varieties, drip irrigation, mulching, INM/IPM
7	Oilpalm	10	20	Usage of high yielding varieties, micro sprinklers,INM/IPM, micro nutrients
8	Coconut	70 nuts/tree/year	100 nuts/ tree/year	Usage of recommended varieties, drip irrigation,IPM/INM
9	Onion	18	20	Usage of hybrid varieties, drip irrigation and fertigation, correct method and right stage of harvesting,proper ventilated storage structure
10	Tomato	20	40	Use of F1 hybrids,semi indeterminate type,trellies,greenhouse/polyhouse /shadenet cultivation,mulching

Promotion of FPOs For Horti.crops

Sl. No	Crop	Districts &Number of FPOs	Number of farmers	Budget required (Rs in lakhs)
1	Tomato	Kurnool-3 Chitoor-3	6000	240.00
2	Onion	Kurnool-3	3000	120.00
3	Chillies	Guntur-3 Prakasam-3	6000	240.00
4	Banana	Kurnool-3 Ananthapuramu-3	6000	240.00
	TOTAL	21	21000	840.00

Micronutrient intervention for Horti crops

Crop	Gross area (Lakh ha)	MNs targeted (Lakh ha)	Productivity (tons/ha)	Price/tone (Rs)	Addl. yield (t/ha)	Additionalvalue (crore)
Chillies	2.12	**0.636**	5	15000	0.50	48
Tomato	1.67	**0.501**	20	12000	2.00	120
Onion	0.55	**0.165**	18	15000	1.80	45
Banana	0.9	**0.27**	35	25000	3.50	236
papaya	0.19	**0.057**	80	35000	8.00	160
Cashewnut	0.82	**0.246**	1.2	65000	0.18	29
Oilpalm	1.05	**0.315**	12	6500	1.80	37
Mango	3.04	**0.912**	9	20000	1.35	246
Sweet orange	0.98	**0.369**	12	25000	1.80	16
	11.32	3.471	192.2			**936**
Budget required						**Rs.40 to 50Crores**

Tomato

AVRDC The World Vegetable Center

District	Area (Ha)	Constraints/ Issues	Interventions
Kurnool	2500	Lack of improved varieties, Lack of varieties suitable for processing, Incidence of bacterial wilt, Improper staking, Lack of processing industries, Postharvest losses	Introduction of high yielding varieties; open pollinated varieties suitable for processing; Proper staking and trellising; Protected cultivation; mulching; drip irrigation/fertigation; Integrated Pest Management(IPM) Introduction of fresh produce handling and processing technologies that are compatible with value chain requirements
Chitoor	2500		
Present value	**5000**	**150 Cr**	**Projected: 300 Cr**

Chilli

District	Area (Ha)	Constraints/ Issues	Interventions
Guntur	2500	Improper drying, Aflatoxin contamination, Indiscriminate use of pesticides Susceptibility to Leaf curl virus	Introduction of simple solar dryers and good drying practices Introduction of IPM and other good agricultural practices, Pesticide residue testing, Promotion of varieties resistant to leaf curl virus, suitable for oleoresin extraction, and suitable for rapid drying
Prakasam	2500		
Present value	**5000**	**125 Cr**	**Projected: 225 Cr**

Onion

District	Area (Ha)	Constraints / Issues	Interventions
Kurnool	5000	Lack of improved varieties Low bulb size Improper storage & drying facility Onion blight Poor nursery management	• Introduction of improved varieties, • IPM & Integrated Nutrient Management (INM), • Solar dryers, • Improved handling and storage techniques and facilities
Present value	**5000**	**120 Cr**	**Projected: 150 Cr**

Eggplant (Brinjal)

District	Area (Ha)	Constraints / Issues	Interventions
East Godhavari	2500	Fruit & Shoot borer Indiscriminate use of pesticides	• IPM • Mulching & drip irrigation
Vijayanagaram	2500		
Present value	**5000**	**75 Cr**	**Projected: 108 Cr**

INTERVENTIONS TO INCREASE YIELDS OF MAJOR HORTICULTURE CROPS

Sl. No	Crop	Present Yield	Increased yield due to interventions	% of increase	Interventions
1	Cashew	0.7 Tons / Ha	1.0 Ton	40%	Cashew Graft + Rejuvenation + IPM+ Drip + Fertigation + Mulching + Farm Mechanization+processing units
2	Mango	9 Ton / Ha	12 Ton	30%	High Density plantation + IPM + Rejuvenation + Canopy Management + Drip + Fertigation
3	Pomegranate	10 Ton / Ha	15 Ton	50%	Good Management Practices + IPM + Mulching + Drip + Fertigation
4	Banana (T.C)	35 Ton / Ha	50 Ton	42%	T.C. Banana + High Density + Drip + Mulching
5	Papaya	80 Ton / Ha	90 Ton	12%	Viral resistant varieties + IPM + Drip + Fertigation
6	Tomato	20 Ton/Ha	150 Ton / Ha	65%	Poly houses + Shadenet houses + IPM + Mulching + Fertigation
7	Onion	18 Ton / Ha	20 Ton / Ha		New Varieties + Drip+storage structures+value addition onion flakes
8	Other vegetables	12 Ton	18 Ton / Ha		Drip Irrigation + Fertigation + Minimal processing units

EXPECTED INCREASES BY THE NEW INTERVENTIONS IN HORTICULTURE CROPS DURING 2015-16

Sl. No	Name of the Component	Crop	Area (in Acres)	Yield (per Acre)	Total Yield	Rate / Ton	Total Value (in Crores) (Revenue for one year)
1	Protected Cultivation	Capsicum	300	50 T	15000 T	40,000	60.00
	Poly Houses / Shadenet Houses	Chinese Keera	300	4 T	1200 T	15,000	1.80
		H. Tomato	200	60 T	12000 T	10,000	12.00
		Roses	100	7 Lakh (Flowers)	7 Crores	Rs. 4/- Flower	28.00
						Rs. 7/-	49.00 (Export)
	SUB-TOTAL		900				150.80
	Area expansion with Micro Irrigation						
2	Tissue Culture Banana	T.C. Banana	5000	30 T	150000	10,000	150.00
3	Pomegranate	Pomegranate	2000	7 T	14000	55,000	77.00
4	Papaya	Papaya	2000	80	16000	10,000	16.00
5	Cocoa area expansion	Cocoa	10000	1 T	10000	1.5 lakh / Ton	150.00
6	Micro Irrigation	Micro Irrigation	2,50,000 (Acres)	30% in acres	12.5 Tons (increase yield)	20000	25.00
7	Post Harvest Losses	-	210 units (each 5000 MTs Capacity)	30% (Saving)	1.05 Lakh MT (10%)	20000	210.00
8	Vegetable cultivation under pandals, trellies and urban clusters	Vegetables	10,000	25 T	2.5 Lakh MT	20000	500.00
9	Oilpalm	Oilpalm	2.50 Lakhs	20 T	50 Lakh MT	7000	3500.00
	TOTAL						4778.80

Thank You

District wise Crop wise break-up contd…

S.No	District	Crop	Value (Crores)
11	Visakhapatnam	Coconut	157
		Turmeric	125
		Coffee	95
		Ginger	95
		Mango	62
		Oilpalm	60
		Cashew	25
12	Vizianagaram	Tomato	160
		Coconut	149
		Oilpalm	90
		Brinjal	62
		Onion	26
		Cashew	13
13	West Godavari	Oilpalm	616
		Coconut	372
		Tomato	222
		Chillies	165
		Cashew	11
		Cocoa	0.5

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District wise Crop wise break-up

S.No	District	Crop	Value (crores)
1	Anantapur	Sweet orange	906
		Papaya	757
		Banana	622
		Chillies	540
		Mango	430
		Water melons	136
		Brinjal	80
		Pomogranate	0.3
2	Chittoor	Mango	794
		tomato	474
		Onion	192
		Bhendi	156
		Papaya	121
		Banana	107
3	East Godavari	Banana	1076
		Coconut	887
		Brinjal	536
		Oilpalm	242
		Mango	199
		Cashew	38
		Cocoa	0.9

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District wise Crop wise break-up contd…

S.No	District	Crop	Value (Crores)
4	Guntur	Chillies	2875
		Banana	442
		tomato	299
		Turmeric	270
		Onion	31
5	Kadapa	Banana	999
		Tomato	379
		Mango	259
		Sweet orange	164
		Turmeric	150
		Onion	102
6	Krishna	Mango	700
		Chillies	425
		Oilpalm	116
		Banana	109
		Coconut	0.7
7	Kurnool	tomato	532
		Banana	373
		Onion	313
		Turmeric	210
		Mango	103

District wise Crop wise break-up contd…

S.No	District	Crop	Value (Crores)
8	Nellore	Lime	510
		Mango	131
		tomato	113
		Chillies	95
9	Prakasam	Chillies	575
		Sweet orange	298
		Bhendi	92
		Mango	76
		tomato	73
		Sapota	72
10	Srikakulam	Coconut	336
		Chillies	155
		Pineapple	133
		Mango	108
		Oilpalm	29
		Cashew	17

ACTION PLAN FOR 2015-16
DEPARTMENT OF RURAL DEVELOPMENT (IWMP & MGNREGS)

RD ACTIVITIES – PSM

- **Natural Resource Management Works (Rs.2563 crores):**
  - **Water Harvesting Structures:-**

    Check Dams, Check Wall, Percolation Tanks, Mini Percolation Tanks, Desilting of Tanks, Farm Ponds, Dug out Ponds, Cattle troughs, Gabion (WHS).
  - **Soil Moisture Conservation Works:-**
    - Continuous Contour Trenches (CCT), Staggered Trenches, SMC trenches, Water Absorption Trenches, Earthen Bunding, Silt Application.
  - **Horticulture and Other Plantations works:-**
    - Horticulture
    - Avenue Plantation
    - Block Plantation
    - Barren hill Afforestation
    - Bund Plantation
    - Pachha Thoranam (Plantations to Landless Poor)
- **Production Systems Improvement (Rs.41.81 crores)**
- **Livelihoods for the assetless (Rs.19.85 Crores)**

District wise & Work wise Action plan of IWMP for the F.Y 2015-16

Sl. No.	District	WHS		SMC		Plantations		Grand Total		
		No.of Works Proposed	Estimated Cost (in Crores)	Extent Proposed (in Ha)	Estimated Cost (in Crores)	Extent Proposed (in Ha)	Estimated Cost (in Crores)	No.of Works Proposed	Plantation & Trench Works (in Ha)	Estimated Cost (in Crores)
1	Anantapur	3801	40.95	3273	3.93	898	11.22	3801	3636	56.10
2	Chittoor	1870	20.15	1610	1.93	442	5.52	1870	1789	27.60
3	East Godavari	711	7.67	613	0.74	168	2.10	711	681	10.50
4	Guntur	325	3.50	280	0.34	77	0.96	325	311	4.80
5	Kadapa	1403	15.11	1208	1.45	331	4.14	1403	1342	20.70
6	Krishna	0	0.00	0	0.00	0	0.00	0	0	0.00
7	Kurnool	2439	26.28	2100	2.52	576	7.20	2439	2333	36.00
8	Prakasam	2460	26.50	2118	2.54	581	7.26	2460	2353	36.30
9	S.P.S Nellore	102	1.10	88	0.11	24	0.30	102	97	1.50
10	Srikakulam	1220	13.14	1050	1.26	288	3.60	1220	1167	18.00
11	Visakhapatnam	1077	11.61	928	1.11	254	3.18	1077	1030	15.90
12	Vizianagaram	711	7.67	613	0.74	168	2.10	711	681	10.50
13	West Godavari	142	1.53	123	0.15	34	0.42	142	136	2.10
Total		**16262**	**175.20**	**14000**	**16.80**	**3840**	**48.00**	**16262**	**15555**	**240.00**

District wise & Work wise Action plan of MGNREGS for the year 2015-16

State: Andhra Pradesh

S.No.	District Name	WHS		SMC		PLANTATIONS		Grand Total		
		No.of Works	Estimate Cost (Rs.in Crs)	No.of Works	Estimate Cost (Rs.in Crs)	Phy (in acres)	Estimate Cost (Rs.in Crs)	No.of SMC & WHS Works	Plantation & Trench Works (in Ha)	Estimate Cost (Rs.in Crs)
1	Anantapur	6494	81.48	2180	66.884	22500	242.318136	8674	9109	390.68
2	Chittoor	5090	78.4675	3200	91.31	10465	108.003884	8290	4237	277.78
3	East Godavari	1681	56.1745	12	0.3645	5600	59.92442	1693	2267	116.46
4	Guntur	1250	40.9375	129	3.6231	2240	29.777792	1379	907	74.34
5	Kadapa	3867	49.9875	2200	68.53	4200	49.613248	6067	1700	168.13
6	Krishna	1368	47.8005	481	12.9325	1500	17.67478	1849	607	78.41
7	Kurnool	3775	54.2675	1136	33.4148	5300	60.085504	4911	2146	147.77
8	Prakasam	4226	107.082	588	16.3074	7300	91.734632	4814	2955	215.12
9	S.P.S Nellore	2246	60.5245	406	10.7683	2500	28.973704	2652	1012	100.27
10	Srikakulam	2899	96.9125	218	7.6184	5800	59.3382	3117	2348	163.87
11	Visakhapatnam	2717	78.685	894	30.7032	5400	60.60836	3611	2186	170.00
12	Vizianagaram	4608	155.3655	737	25.2035	6900	80.674624	5345	2794	261.24
13	West Godavari	1011	38.525	135	4.4703	2650	29.11408	1146	1073	72.11
	Total	47168	1034.71	12316	372.13	82355	917.841364	59484	33342	2324.68

District activity plan of Ananthapur

Technology	Phy target	Unit	Expected outcomes	Value in Crores	Convergence institutions	Role of NGOs/ Pvt companies	Budget	Constraints
Natural resource Management								
Soil Moisture Conservation	2720	Nos	20-30% additional soil moisture conservation Reduced soil erosion 80% and above	70.81	Forest Dept, Agrl.Dept, ITDAs	PIAs		Coordination from line Depts
WHS	11804	Nos	Increase in ground water level upto 0.5 - 1.0 m Increase in irrigation potential (Ayakut) Changing from single crop to double crop Availability of drinking water Increase in cultivable area	122.42	Forest Dept, Irrigation & PRED	PIAs		
Plantations	22864	Acres	Increase in area under vegetation Increase in area under horticulture	253.54	Horticulture, Forest Dept	PIAs		
Production Systems Improvement	49588	Nos	Increase in crop production area & Productivity Increase in area under fodder Increase in milk production	-	Agricuture, AH, Fisheries, Sericulture, Horticulture	Resource Organizations/ PIAs	20 crores from Agrl.Dept as subsidy	In adequate budget & priority given to own dept. targets
Liveihoods for the assetless	7941	Nos	Increase in no. of livelihoods Increase in income	-	SERP, NGOs	Resource Organizations/ PIAs		CB gap. Convergence gaps between field staff
TOTAL				446.77				

P P P

WATERSHED PROGRAMME

PARTNERSHIPS UNDER IWMP

APART FROM GOVT. INSTITUTIONS

- NGOs AS PROJECT IMPLEMENTING AGENCIES
- THIRD PARTY AGENCIES FOR MEL&D
- NGO FOR ACTION RESEARCH
- ANCHOR ORGANIZATIONS FOR CAPACITY BUILDING SUPPORT
- FOR IT SUPPORT

SCOPE

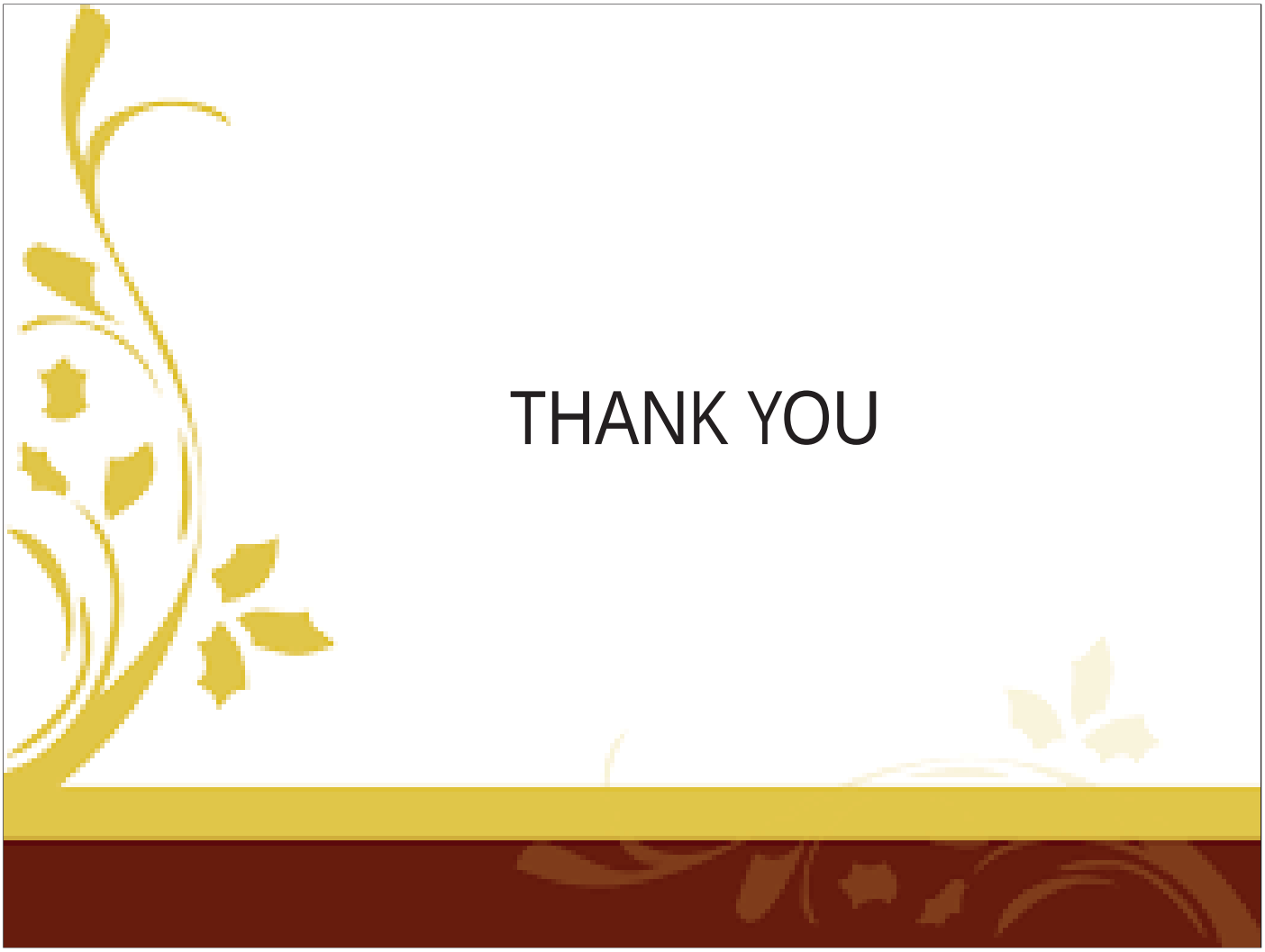
- TREATMENT OF FOREST FRINGE AREAS OF WATERSHED BOUNDARIES
- STRENGTHENING INSTITUTIONS FOR COMMUNITY MANAGED WATERSHED PROGRAMME
- PRODUCTION SYSTEMS IMPROVEMENT (PILOTS & UPSCALING OF BEST PRACTICES)

SCOPE

- LIVELIHOODS FOR THE ASSETLESS
- EXPOSURE TO BEST PRACTICES IN WATERSHED MGT.
- ACTION RESEARCH / STUDIES IN WATERSHED MANAGEMENT
- DOCUMENTATION
- IMPACT ASSESSMENTS

RECOMMENDATIONS

- ADDITIONAL FUNDS REQUIRED FOR INNOVATIONS / PILOTS / ACTION RESEARCH / TREATMENT OF FOREST AREAS
- GOVT. / POLICY MAKERS TO DECIDE FOR PPP ARRANGEMENT UNDER IWMP


THANK YOU